

Rebecca L. Tatum. Finding the Special in Special Librarians: An Analysis of Their Inspiration, Education, Career History, and Job Satisfaction. A Master's paper for the M.S. in L.S. degree. April, 2017. 133 pages. Advisor: Rebecca B. Vargha

This study aims to develop a deeper understanding of the individuals who are special librarians. In order to create this defining view into special librarianship, a secondary analysis of the Workforce Issues in Library and Information Science (WILIS) was completed. Comparisons were made between special librarians and librarians who work in traditional library settings to determine significant patterns and differences.

Through statistical testing, the areas of inspiration, education, career history, and job satisfaction were explored. Despite their similarities, the two librarian types differed with their motivations and valued job characteristics. Special librarians would often value job qualities uniquely available in special libraries, like flexible career options and opportunities for advancement while they were less inspired by the service-oriented aspects of traditional librarianship, like helping others and making a difference in society.

Results from this study create a clearer definition of who special librarians are and what makes them so special.

Headings:

Special librarians

Surveys -- Librarians

Special librarians -- Education

Special librarians -- Training of

Special librarians -- Career development

Special librarians -- Job satisfaction

FINDING THE SPECIAL IN SPECIAL LIBRARIANS:
AN ANALYSIS OF THEIR INSPIRATION, EDUCATION, CAREER HISTORY, AND
JOB SATISFACTION

by
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Introduction

The rapid development of this institution for bringing to the aid of modern industry whatever the student or the practitioner may have thought fit to put into type is very significant. It means that here in the opening years of the Twentieth Century, 550 years after the invention of printing, men of affairs are for the first time beginning to see clearly that collections of books and printed materials are not, as they were long held to be by most, for the use simply of the scholar, the student, the reader, and the devotee of belles-lettres, but are useful tools, needing only the care and skill of a curator, of a kind of living index thereto, as it were to be the greatest possible help in promoting business efficiency. (Dana, 1910, p. 5)

As early as 1909, professionals working in libraries that provided information services to specialized institutions decided that the unique demands of their jobs separated them from other libraries (Bender, 2003). Led by John Cotton Dana (1910), a public librarian overseeing a businessmen's branch in Newark, New Jersey, these librarians broke new ground by defining a new area of librarianship and writing their own constitution (Bender, 2003). On July 2, 1909, the term "special library" was created as the Special Libraries Association (SLA) was formally organized with Dana at the helm (Bender, 2003). The inaugural edition of *Special Libraries*, the official journal of the SLA, explained that the SLA was formed with the goal to "unite in cooperation" the libraries that were isolated and had "unique positions and confined problems [that] had little in common" (Special Libraries Association [SLA], 1910, p. 1). Even in 1910, these special libraries were so different from each other that Dana (1910) commented on how varied the collections were in their character and use "that no definition will any longer

satisfactorily include them all” (p. 5). With such differences, how did anyone decide they wanted to become a special librarian?

Today, a special library continues to be defined as a library that supports a specialized environment or clientele group. There are still a variety of ways to define this specialized environment or clientele group. A special librarian may work in a library (or information center) that supports a corporation, hospital, the military, museum, private business, non-profit, the government, a law firm, or any highly specialized organization, like those that support people with disabilities. Of the estimated 119,487 total libraries in the United States, only 8,152 are special libraries, including corporate, medical, law, health science, religious, military, and government libraries (American Library Association [ALA], 2015a). Guy St. Clair (2003), former SLA president, believes special libraries will always have an integral place in the library field, because people constantly require two paths of service: “one concentrating on academic, scholarly, cultural, and societal needs; the other providing practical and utilitarian information for the workplace” (p. 19). Currently, the SLA (2016a; 2016b) serves approximately 11,000 members organized into 55 regional chapters in 75 different countries and has 26 distinct divisions that support the multiple discipline areas among special libraries, including Chemistry, Education, Social Science, Solo-Librarianship, News, and many others (ALA, 2015b; Clair, 2009). Professionals that enter the special library setting can come from multiple educational backgrounds with some being from library or information science while others have training/degrees in the library’s field of expertise, including music, law, health science, and art. Metadata services librarian, digital preservation specialist, cataloger, data analyst, archival processor, head curator, information architect, reference

librarian, project manager, and social media strategist are just some of the job titles a special librarian can hold in and outside the library (Dority, 2016; Hunt 2013). In a presidential address to SLA members, former SLA president, Deb Hunt (2013) posits that the trend of LIS employment moving outside of libraries is increasing quickly (from 15% in 2007 to 27% in just one year) and advises special librarians of the fact that “keeping yourself ‘sustainable’ through SLA programs and volunteer opportunities can prepare you to exploit emerging career options” (p. 2).

Despite their differing job titles or degree labels, these professionals are “connected by their focus on managing and applying the data, information, and knowledge required in their setting” (SLA Competencies Task Force, 2016, Introduction, para. 3). As information professionals, special librarians provide a wide range of services to support their organizations. In order to create a common platform of expected career objectives/skillsets and a guide for current and potential professionals to truly understand the responsibilities of special librarians, the SLA Competencies Task Force (2016) recently developed a list of six core competencies each with further defined details that define what special librarians do in their various positions: 1) Information and Knowledge Services; 2) Information and Knowledge Systems and Technology; 3) Information and Knowledge Resources; 4) Information and Data Retrieval and Analysis; 5) Organization of Data, Information, and Knowledge Assets; and 6) Information Ethics. From assessing and addressing the information/knowledge needs of an organization to providing resources, technology, data retrieval, information management, and analysis, special librarians supply the tools to allow their organizations to thrive (SLA Competencies Task Force, 2016).

The occupational diversity in the special library setting can pose challenges for recruitment of future professionals, especially since the job descriptions may differ greatly. Despite consisting of so many different types of libraries, special librarians only made up 13% of the total number of librarians in the United States during 2015 (Department for Professional Employees, 2016). Due to the diversity of special librarianship, a library student, mid-career librarian, or current professional may not realize that a career in special librarianship is ideal for them. The aim of this study is to gain insight into special librarians' motivations, education, professional histories, and satisfaction in their careers. The results will provide critical information for recruitment efforts as well as guidance for potential special librarians. Analyzing these key components about special librarians will provide a deeper understanding of the individuals who serve as information professionals in their various organizations as well as an illuminating view into the profession of special librarianship, therefore answering the question: How does anyone decide they want to become a special librarian?

Literature Review

In order to gain a deeper understanding of the professionals that are special librarians, research was conducted to analyze certain aspects of special librarians—their motivations, education, career history, and job satisfaction. However, the majority of relevant literature focused on the more traditional library settings of public, academic, and schools as well as a general analysis of the library profession as a whole. Research shows that librarians, inspired by a love for reading and books or a desire to help people, learn how to meet their patrons' information needs in a variety of settings (Taylor, Perry, Barton, & Spencer, 2010; Gordon & Nesbeitt, 1999; Moniarou-Papaconstantinou, Vassilakaki, & Tsatsaroni, 2015; Weihs, 1999). Most librarians have some type of Masters of Library and Information Science (MLIS) degree and work in traditional library settings (ALA, 2015a; ALA, 2015b; Bureau of Labor Statistics, 2015). Most librarians are satisfied with their career; either viewing it as a calling or as a fresh start with a fulfilling second career (Gordon & Nesbeitt, 1999; Lambert & Newman, 2012). Among all of the reviewed literature, one notable example of broad research on the profession of librarianship as a whole can be found in the Workforce Issues in Library and Information Science (WILIS) program. The goal of the WILIS team was to understand where library and information science (LIS) graduates have been, where they are now, and where they hope to be in order for the library profession to effectively plan for a successful future (Marshall, Solomon, & Rathbun-Grubb, 2009)

The WILIS 1 project, in particular, is integral to this study as archived result datasets will be used to discover commonalities among the special library profession as well as create comparisons between special librarians and other library professionals. Since special librarianship involves such a specialized field of practice, it is difficult for LIS students and practicing librarians to fully comprehend the unique opportunities available in this profession. When a search for literature specifically about special libraries was conducted, many of the resources found had a narrow focus on one type of special library setting, like corporate (Rimland & Masuchika, 2008), law (Slinger & Slinger, 2015), art (Tewell, 2012), or business (Perret, 2011). Isolating the WILIS data on special librarians as a whole will provide specific information to help interested prospects learn about this integral field of librarianship. Due to the great variety found in special libraries, a comprehensive approach to special librarianship will create a unique perspective for recruitment and career guidance.

Inspiration

Why does someone become a special librarian? In order to understand the inspiration and motivations of a special librarian, these factors were first researched in the broad spectrum of librarianship as a whole and then narrowed to special librarians. Researchers will often survey practicing librarians or students in Masters of Library and Information Science (MLIS) programs to determine the various factors that attract them to the library profession. The most popular answers usually are: influenced by a librarian or other mentor, previous work in libraries, and love for reading or books (Taylor et al., 2010; Gordon & Nesbeitt, 1999; Moniarou-Papaconstantinou et al., 2015; Weihs, 1999). Gordon and Nesbeitt (1999) confirm that previous work in libraries, especially as

paraprofessionals or student assistants, inspired many (71% of surveyed librarians) to pursue their MLIS. Other motivating factors for pursuing librarianship as a career include enjoyment of information technology, love for research, desire for an academic job, wanting to serve the community, desire to help others, interest in teaching, and the opportunity for further education (Gordon & Nesbeitt, 1999; Moniarou-Papaconstantinou et al., 2015). When 391 library staff members were asked if they felt that librarianship was a calling, nearly half (49%) agreed while only 20% disagreed (Gordon & Nesbeitt, 1999). Answers will also differ because of the respondents' unique background and life experiences. In the informal survey conducted by Jean Weihs (1999), one woman was inspired to become a public librarian because she was able to borrow books that she could not afford from the public library in Hong Kong while another stated she became a librarian, because in her grief after losing her husband during the final days of World War II, she wanted to attend university in California and the only program accepting late applicants was librarianship.

As found in the studies conducted by Taylor, Perry, Barton, and Spencer (2010) and Tewell (2012), librarians are often attracted to the profession because of job functions, like organizing data, customer service, and information management. This is also true for special librarians (Rimland & Masuchika, 2008). For some, a career in librarianship was motivated by a career change in which their previous work experience led to a job in a library (Gordon & Nesbeitt, 1999; Moniarou-Papaconstantinou et al., 2015; Weihs, 1999). In fact, Taylor et al. (2010) found that only 6% of the surveyed participants wanted a career in librarianship before starting college, 39% considered it a goal since college, 21% became interested within five years of graduating college, and

32% became interested in librarianship five or more years after graduating college. In their systematic review of studies investigating the motivating factors that inspire a career in library and information science (LIS), Moniarou-Papaconstantinou, Vassilakaki, and Tsatsaroni (2015) determined that gender and ethnic background have an impact on the decision to pursue librarianship. The “influence of role models, especially among academic librarians, in motivating professionals is more evident in minority librarians than among students with advanced degrees in other subject fields” (Moniarou-Papaconstantinou et al., 2015, p. 596).

Many professionals have found special librarianship, particularly, as a way to combine interests in a particular subject area or previous profession with their fondness of customer service and information management (Tewell, 2012). Tewell (2012) discovered that the art librarians he surveyed found librarianship to provide job stability, daytime work hours, a steady paycheck, and the ability to pursue outside interests, artistic or otherwise (p. 44). The proportion of MLIS students who are considering careers in special libraries appears to be increasing, from 34% in 2004 to 41% in 2009, as represented by the data collected at the University of Alabama (Taylor et al., 2010). In fact, Taylor et al. (2010) noticed an increase in the number of respondents who marked “other” for preferred library subfield; listing military, history of library, medical, art, music, legal, federal, digital, and metadata; instead of choosing more traditional subfields, like reference. This finding signifies “both a surge of interest in special librarianship and the rise of new technology-based subfields (like metadata) that have grown outside the scope of the traditional subfields” (Taylor et al., 2010, p. 40). The choice of special library setting can be motivated by several factors; for example,

Moniarou-Papaconstantinou et al. (2015) determined that professionals who chose sci-tech or business librarianship were both motivated by their background and interest in their respective fields, the increased availability of job opportunities, and the potential for higher salaries compared to other specialties.

In order to understand what motivates librarians, some studies have delved into the inner core of their psychological make-up by trying to determine what type of people become librarians. Personality studies conducted on librarians have used various methods, including the Myers-Brigg Type Indicator (MBTI) (Brimsek & Leach, 1990), Holland's Typological Theory (Afolabi, 1996), and the Personal Style Inventory (Williamson, Pemberton, & Lounsbury, 2005). Afolabi (1996) provided a global perspective of the assessment of librarians' personalities as he sampled 20 library students in the LIS program at Ahmadu Bello University, Zaria in Nigeria. In completing an inventory determining the dominant personality types of librarians, 16 students (80%) chose social, 12 (60%) chose investigative, and nine (45%) chose enterprising (Afolabi, 1996). Brimsek and Leach (1990) conducted a large-scale study on special librarians as they conducted the MBTI personality assessment on 1,413 randomly selected SLA members. Results showed that SLA members had majority scores in the categories of Introversion (65%), Intuition (57%) Thinking (65%), and Judgement (68%) (Brimsek & Leach, 1990). Interestingly, the SLA data was opposite from results of the general population in all cases except for the Judgement/Perception category for which Judgement was the majority with both (Brimsek & Leach, 1990). The most common profiles were ISTJ (17.41%), INTJ (14.37%), ENTJ (8.85%) and INTP (8.49%) (Brimsek & Leach, 1990). Drawing conclusions from these results, Brimsek and Leach (1990)

describe the “seemingly diverse, but in fact very homogenous group of SLA members” as “problem solvers, visionaries, architects of the future, competency-based, decisive, adaptive, action oriented, curious, and matter-of-fact individuals” (p. 336). Along with other person-oriented academic reference librarians, public librarians, school librarians, distance education librarians and records managers, Williamson, Pemberton, and Lounsbury (2005) found that special librarians have high extraversion, low tough-mindedness, and high teamwork skills.

Education

As they work in a number of settings, from advertising agencies to zoos, all special librarians provide information and knowledge management services to meet the specialized needs of their organization. With such variety in special librarian job descriptions, education, training, and professional development opportunities are key factors in determining which positions match an individual’s experience and skillset. The diversity prevalent in special library positions can be confusing to students in an LIS program, which may deter them from selecting special librarianship as an academic track. White and Paris (1985) remark on this difficulty and explain how LIS students do not usually comprehend the range of opportunities in special librarianship until after they have completed a semester or two.

In her career guide for librarians and other information professionals, Dority (2016) informs interested special librarian prospects that a career in nontraditional librarianship requires “strong mastery of the basic LIS skills” as well as a familiarity with “basic business concepts, operations, and strategy in order to most effectively contribute to the goals of your organization” (p. 90). An understanding of the industry in which the

organization exists as well as its information resources is necessary for special librarians to provide services to that organization (Dority, 2016; Rimland & Masuchika, 2008). Rimland and Masuchika (2008) assert that falling into the philosophy that only “the engineers worry about the manufacturing details, the marketers about the customers, and the librarians deal with the information” is detrimental to a special librarians who are trying to find their place in their organizations/corporations (p. 332). It is a constant job of a special librarian to prove his/her worth and to “remind the entire organization how the library can help all units succeed in their appointed business” (Rimland & Masuchika, 2008, p. 328).

The question of whether special librarians should be information professionals, content specialists, or both is an issue that has been discussed for many years (Asheim, 1946; Bates, 1999; Cataldo, Tennant, Sherwill-Navarro, & Jesano, 1996; Detlefsen 1992; Williams & Zachert, 2000). In his 1946 article passing on hard-learned lessons to prospective special librarians, Lester Asheim (1946) notes that a special librarian is “much more than a custodian and publicizer of books; he must be the depository of the knowledge which the books contain—the source of the information himself, rather than the guide to the source” (p. 1599). On the other hand, Marcia Bates (1999) contends, “Surely, it is said, one must be an expert in molecular biology to be a good information specialist at a biotechnology firm. I am among the many, however, who contest this assumption. I would argue that what one mainly needs is information expertise and talent, not content expertise. The latter is a nice bonus, if it is present, but is not essential” (p. 1045).

Dority (2016) advises prospective special librarians to explore job posting sites to get an understanding of the type of nontraditional library positions available and their requisite education and skills (p. 89). To follow this guidance, a brief review of the educational qualification sections of a few current special library job descriptions was completed and proved to be difficult in finding common education requirements. As expected, many require a Master's degree in Library/Information Science from an ALA-accredited institution. However, some have the common qualification extended by adding an "accredited graduate degree in another appropriate discipline" (Virginia Commonwealth University Libraries, 2016) while some do not even mention a specific degree, just the requirement that "applicants must have had progressively responsible experience and training sufficient in scope and quality..." (Library of Congress, 2016). This implies that subject knowledge and career experience may be more important to these institutions than education in information science (Detlefsen 1992). Depending on the library's specialization, many employers also prefer or require degrees in the subject area of the library in addition to the MLIS degree. For example, some music libraries prefer an "undergraduate or advanced degree in music, musicology or a related field" (Music Library Association, 2016) in addition to the MLIS while many law libraries require both MLIS and JD (Juris Doctor) degrees from accredited institutions in order to provide the highly skilled services required in this setting (Duke University Law School, 2016; Detlefsen 1992; Slinger & Slinger, 2015). Tewell (2012) found that all of the 280 surveyed art librarians had an MLIS degree, but only 57% had a Master's degree in another area (52% in Art History, 16% in Fine Arts, 11% in Architecture, and 4% in History) (p. 43). Practicing librarians with an MLIS degree have also acknowledged the

importance of obtaining a subject-specialized degree, especially for the motivations of upward career mobility and increased pay levels while some do not view an additional higher-education degree as a needed qualification (Detlefsen 1992; Perret, 2011; Rimland & Masuchika, 2008).

In the study conducted by White and Paris (1985), directors of academic, public, and special libraries were asked about their hiring preferences and favored skillsets in prospective employees. Interestingly, it was pointed out that hiring managers in small special libraries are rarely librarians and are not familiar with the fundamentals of library science (White & Paris, 1985). According to the study, hiring managers in special libraries are looking for professionals who are knowledgeable in the “literature of science and technology, advanced cataloging and classification, and system-specific online searching” (White & Paris, 1985, p. 10). Hiring managers are expecting the special librarian to be able to adapt to how the staff in the organization thinks and learn to understand their “business speak” as well as keep a pulse on the world that surrounds the organization, however, these skills are not generally taught in library school (Rimland & Masuchika, 2008). Rimland and Masuchika (2008) advise LIS students and prospective special librarians to tailor their education to fit the needs of the organization they hope to work for by taking information resource classes for specific subject areas, like science, business, and law; participating in Web-based Information Science Education (WISE) consortium classes that will supplement content knowledge; attending related content classes offered through other schools at the university; participating in professional internships, field experiences, and independent study opportunities; and supplementing

education through online or in-person continuing education and professional development classes.

Career History

As Tewell (2012) asks in the first line of his informative article about art librarians, “Is there such [a] thing as a ‘typical’ career path for art librarians?” (p. 41), this question can be expanded to include all special librarians. Is there a typical career path for special librarians? Each special librarian will have their own career trajectory, their own story as to how they ended up working in a special library. From the “accidental” special librarian to the one who had a well-developed career plan, much can be learned from their examples and path to employment in special libraries (Murray, 2016; Perret, 2011; Tewell, 2012). Since special librarianship can be highly specified according to the library’s focus area, career paths tend to be very individualized. However, after analyzing several articles from the perspectives of art, law, corporate, and business librarians, despite their differing specialty areas, some trends were noted.

Special librarianship is often a second career for many, providing them with the chance to combine their learned skills and professional experience with a job in a library (Slinger & Slinger, 2015; Tewell, 2012). Murray (2016) comments that Millennials (born 1982 and later) are “not yet entering the special libraries workforce in the same numbers as they are entering other fields” (p. 189). She concludes that librarianship is often a second career because many do not go directly from their undergraduate degree to enter graduate school (Murray, 2016). Slinger and Slinger (2015) concluded that law librarianship is often a second career for lawyers, because the majority of students pursuing their JD degree are not aware of this career possibility. When surveyed, other

special librarians have mentioned a disillusionment with their previous career and saw librarianship as a new start (Moniarou-Papaconstantinou et al., 2015; Tewell, 2012). Second-career librarians often come from diverse backgrounds—teaching (one of the most common), medicine, computer programming, journalism, secretarial work, counseling, social work, writing, editing, publishing, and bookselling—some even falling serendipitously into their new profession of librarianship (Gordon & Nesbeitt, 1999; Lambert & Newman, 2012).

Gaining professional experience is a common tidbit of advice presented in many of the reviewed articles. Insight from practicing librarians can prove to be helpful guidance for prospective professionals in planning their career trajectories (Dority, 2016; Hunt, 2013). Whether within or outside the library setting, professional experience will be integral in obtaining a position in a special library (Tewell, 2012). Hunt (2013) advises special librarians: “We need to be resilient, taking our skills with us no matter where we go. Career sustainability is about growing in our current jobs and preparing for future jobs as well, by continuing to deepen our expertise and experience and demonstrate the strategic value we provide” (p. 2). Experience in the professional and library setting is particularly characteristic of those aspiring to hold leadership and administrative positions in a special library (Slinger & Slinger, 2015). In order to provide the significant supervisory, technical, and academic responsibilities these positions require, librarians must first start their work in a subordinate role in the library setting, then work their way up the career ladder (Slinger & Slinger, 2015). Slinger and Slinger (2015) found that experience in a law library was an integral necessity to obtain the position of director. Recently, only 4% of law library directors reported that they were

able to obtain their directorship without prior experience in law libraries (Slinger & Slinger, 2015). This study revealed that the average years of experience before obtaining a directorship had increased from 5 years in 1986 to 10 years in 2012 (Slinger & Slinger, 2015, p. 183). They conclude that now there is a higher level of competition for the position as well as the need for more experienced professionals to fulfill the increase in sophisticated responsibilities expected from a law library director.

Since the library job market can be very competitive and fierce in a variety of library specialty areas, not just in law librarianship, practicing professionals have often advised prospective librarians to network widely and expend considerable effort in expressing their enthusiasm while making their achievements and experience stand out (Dority, 2016; Murray, 2013; Tewell 2012). Tewell (2012) obtained a unique perspective from the surveyed art librarians as they warned future librarians to be wary of entering library work during a difficult job market. Their advice was to “settle for a less than perfect position and work their way towards opportunities better suited to their career goals” (p. 44). Others recommended obtaining employment in “less than perfect” positions outside the library area to gain more experience in customer service or management in order to provide a “stepping stone towards library work” (Tewell, 2012, p. 44).

Many in librarianship enjoy the mobility that is available in the profession as they seek employment in different positions (cataloger, interlibrary loan, reference) in a library, change libraries within the same type (moving from one art library to another), and even explore different library settings (a former public librarian working as a corporate librarian) (Gordon & Nesbeitt, 1999). Tewell (2012) found that more than half

of the surveyed art librarians chose to pursue art librarianship while already employed in libraries (p. 45). Some of these “mobile” librarians may have previous experience in the library’s specialty area while others may not. The 2012 results from the Slinger and Slinger (2015) study showed that the number of law libraries where the surveyed directors worked prior to their directorship varied: 39% worked for only one law school library, 35% worked for two (an increase of 7% from 1986), 16% worked for three (an increase of 2% from 1986), and 6% worked for four (a 5% increase from 1986) (p. 184). This career mobility/transition in the library field was also exhibited among Gordon and Nesbeitt’s (1999) respondents, as 108 of the 391 librarians had successfully switched. The experience of these librarians also showed that special librarianship is often a later choice for librarians as nearly half of librarians who changed library settings ended up in a special library, transitioning from either public or academic libraries (Gordon & Nesbeitt, 1999). Moniarou-Papaconstantinou et al. (2015) also found evidence in LIS literature that special librarians (in addition to teachers, library assistants, and researchers) often transitioned to academic library positions. After Dority (2008) explains that the “library science profession offers so many possible directions,” she encourages librarians, especially those ready for a change, to reinvent themselves and redefine their careers (p. 18). To initiate this change, Dority (2008) even recommends that librarians try out library work at the nontraditional settings of “government agencies, hospitals, academia, cultural institutions, law firms, corporations, think tanks, correctional institutions, [and] trade associations” (p. 18).

Job Satisfaction

Job satisfaction, one of the best-researched concepts in work and organizational psychology, has been defined and studied by a number of researchers and practitioners for many years (Dormann & Zapf, 2001). Library and information specialists are not strangers to the assessment of job satisfaction as they have been the subject of many studies as well as the researchers conducting their own. Among the numerous definitions and theories concerning job satisfaction, several have been applied to librarians, including personality traits (Williamson et al., 2005) and work values (Moniarou-Papaconstantinou & Triantafyllou, 2015). Results from studies like these are beneficial for all librarians, particularly library administrators, to gain an understanding of the atmosphere created by their libraries and how satisfied their staff are with their jobs (Ard et al., 2006). Retaining successful and productive librarians is paramount in continuing to provide exceptional services and information management. Job satisfaction is also a very important measurement for prospective librarians to determine if a particular library setting, like special librarianship, fits their needs, interests, talents, values, and personality (Ard et al., 2006). Ard et al. (2006) contend that few factors affect the health of a library as much as the quantity and quality of the people working in the library, because they create the level of morale and caliber of service, determining “whether the library will be forward- or backward-looking, dynamic or static, user- or inward-focused—in other words whether the library will be an information powerhouse or a dreary warehouse” (p. 237).

Overall, library professionals are satisfied with their jobs and careers (Gordon & Nesbeitt, 1999; Moniarou-Papaconstantinou & Triantafyllou, 2015). According to

Gordon and Nesbeitt (1999), 75% of their surveyed library professionals viewed their role as librarians as a necessity during the information age, 70% would recommend a library career to others, and 55% think their profession is equivalent to other professions. Two veteran librarians commented on the value and necessity of their profession by stating, “My experience tells me that the more information [there is] available, the more our library users need us” and “As more information moves online, more people are going to be totally confused” (Gordon & Nesbeitt, 1999, p. 36-37). These results encouraged Gordon and Nesbeitt (1999) to assert that “in an age where job dissatisfaction seems endemic, librarians’ view of their profession as both unique and important came through clearly” (p. 36).

Despite the numerous examples of value in the library profession, evidence of job dissatisfaction is present among librarians. Two of the most common expressed reasons for dissatisfaction with the library profession is public ambivalence about the validity of the profession and lower salaries in comparison to other professions (Gordon & Nesbeitt, 1999). Gordon and Nesbeitt (1999) report that 6% of the surveyed librarians would warn prospective librarians of the difficult job market and 15% would recommend librarianship only to people strongly interested in technology. Technology may be a source of dissatisfaction for some in the field as library science and information technology are becoming more closely aligned (Gordon and Nesbeitt, 1999; Murray 2016). Gordon and Nesbeitt (1999) included the comment of a newly graduated academic librarian to sum up the general nature of many of the complaints:

I wouldn’t recommend [librarianship to others] unless they knew the facts first. The *Occupational Outlook Handbook* has a bleak outlook for the profession, jobs can have several hundred applicants, and without a second master’s, you’ll be waiting for someone to leave/burn-out/die before you’ll get a job in an academic

library. Five years from now, [I may] do something in a computer-related field, where the salaries are higher and you have more respect. (p. 39)

Identifying the reasons for employee dissatisfaction is an important step in moving the library profession in the right direction, while acting on these issues will certainly improve retention and recruitment rates in the profession as a whole.

Moniarou-Papaconstantinou and Triantafyllou (2015) were able to link job satisfaction among librarians with the intrinsic work values, “namely the opportunities for learning, expression of creativity, autonomy, use of knowledge and abilities, and adoption of innovative technological developments” (p. 164). After 1,352 librarians and information science professionals were surveyed and completed a personality inventory, Williamson et al. (2005) found that the five variables of optimism, emotional stability, teamwork, visionary work style, and work drive accounted for 20% of the variance in job satisfaction and the four variables of optimism, work drive, emotional resilience, and assertiveness accounted for 19% of the variance in career satisfaction. Williamson et al. (2005) agree with Nawe (1995) and assert that librarians need to be emotionally resilient in order to deal with on-the-job-stresses, like budget cuts, changes in technology, communicating with strangers, escalating user demands, excessive workload, monotony of work, lack of specialist knowledge, and the low status given to the profession as a whole.

Analysis of these studies will often show significant differences in the sources of job satisfaction among the various library settings (academic, public, school, archives, and special libraries). Moniarou-Papaconstantinou and Triantafyllou (2015) indicated that librarians from various settings differed in how their extrinsic, social, and prestige work values predicted their job satisfaction. They found that professionals in special

libraries (25.8% of the surveyed librarians) were more satisfied with extrinsic work values; defined as pay, job security, and working conditions; than those in public libraries ($p = .032$) and archives ($p = .004$). They also found that professionals in public ($p = .029$) and special ($p = .032$) libraries were more satisfied with social work values (defined as relationship with co-workers, assisting users, and contribution to society) than their colleagues in archives.

Dority (2016) describes the nontraditional LIS environment as fun and challenging as well as a place full of possibilities and activities that may push your comfort zone. Although a career in special librarianship can offer stimulation and challenge, it can be fraught with anxiety and stress (Dority, 2016). In addition to their LIS skills, “special librarians are expected to have a high level of professional knowledge about their topic area, because high-risk decisions (e.g., life-changing medical decisions, million-dollar corporate investments) may on occasion rest to a degree on their expertise” (Dority, 2016, p. 85). Rimland and Masuchika (2008) explain that corporate librarians will often have time-sensitive information emergencies at least once a week. Examples of this may be searching for a critical, missing piece of information to complete a contract just minutes before a deadline or retrieving an important article that the vice president needs in order to prepare for a stockholders meeting that takes place in 30 minutes. They uphold that although these occurrences are often very stressful, “they can get your adrenaline pumping and are good opportunities to once again prove the value of the library to the decision makers in the corporation” (Rimland & Masuchika, 2008, p. 328). This is very important because job security and downsizing the library are often concerns for special librarians (Dority, 2016; Murray, 2013). Another concern for special

librarians is the fact that they might be a solo-librarian in their organization, so they will have to deal with library operations and management by themselves without colleagues to assist or provide feedback (Murray, 2013).

WILIS Study

Workforce Issues in Library and Information Science (WILIS), a large-scale “program of research designed to study the educational, workplace, career and retention issues faced by library and information science (LIS) graduates,” was a partnership between the University of North Carolina School of Information and Library Science (UNC SILS) and the University of North Carolina Institute on Aging with funding from the Institute of Museum and Library Services (UNC SILS, 2013, WILIS section). WILIS researchers upheld that, “while multiple organizational, social, and economic factors affect workforce supply and demand, it seems more important than ever that LIS programs develop ways in which data can be gathered on an ongoing basis so that educational and workforce planning can be done in an evidence-based manner” (Marshall, Marshall, Morgan, Barreau, Moran, Solomon, Rathbun-Grubb, & Thompson, 2009b, p. 303). The WILIS program (UNC SILS, 2013) consisted of the following three interlinked components:

- WILIS 1 (2005-2008): the initial study consisting of a comprehensive web-based survey to collect data on the long-term career patterns of graduates from the six LIS programs in North Carolina between 1964 and 2007;
- WILIS 2 (2007-2010): based on the WILIS 1 model, a transferrable alumni tracking system that can be used by all LIS Master’s programs was

created and tested on 33 LIS programs using the Community Based Participatory Research (CBPR) approach; and

- WILIS 3 (2010-2013): built on the previous WILIS studies by focusing on a collaborative approach to data sharing.

To complete the WILIS studies, the de-identified datasets from WILIS 1 and 2 were made publicly accessible on the Odum Institute for Research in Social Science UNC Dataverse in order to “enable LIS programs to explore their own data and benchmark with other programs” (UNC SILS, 2013, WILIS 3 section). Two special issues of *Library Trends* 58(2) and 59(1-2) have featured articles which explain the process of creating the WILIS program and present the findings of each study. Marshall, Solomon, and Rathbun-Grubb (2009) introduce the WILIS program in the hopes that it “will stimulate discussion, lead to the sharing of additional research results and best practices, and inform future planning for all stakeholders” (p. 123).

Members of the WILIS team and other researchers have published several articles and scholarly papers (masters theses and doctoral dissertations) explaining the process of creating and conducting the retrospective career survey as well as analyzing the resulting data. After reviewing these existing data analyses, several articles were found to focus their studies on specific library settings, including public libraries (Patillo, Moran, & Morgan, 2009; Rathbun-Grubb & Marshall, 2009), academic libraries (Moran, Marshall, & Rathbun-Grubb, 2010; Patillo, Moran, & Morgan, 2009), transitioning between academic and public libraries (Greenberg, 2011), school libraries (Solomon & Rathbun-Grubb, 2009), and science libraries (Walker, 2010). With over 1,700 variables available for analysis, the WILIS team anticipated that the WILIS 1 data would be useful for

investigating many aspects of LIS careers in the future (Marshall, Marshall, Morgan, Barreau, Moran, Solomon, Rathbun-Grubb, & Thompson, 2009a, p. 144).

Inspiration

A driving force behind the WILIS study was the absence of comprehensive workforce data in LIS programs. Since librarianship does not have annual licensing at the state or national levels, it was the goal of the WILIS program to provide data on the whereabouts, career history, and future plans of a large cohort of LIS graduates (Marshall, Solomon, & Rathbun-Grubb, 2009). One particular concern was the potential LIS workforce shortages resulting from the baby boomer generation retiring (Marshall, Solomon, & Rathbun-Grubb, 2009; Morgan, Marshall, Marshall, & Thompson, 2009). Although the number of graduates with LIS degrees has been slowly increasing since the late 1990s, this supply of new professionals does not appear to be adequate to fill the vacancies created by retiring baby boomers, thus there is an increased need for recruitment (Marshall, Solomon, & Rathbun-Grubb, 2009; Morgan, Marshall, et al., 2009). Analysis of the survey data in which LIS professionals reported factors that motivated them to work in the field of librarianship should provide integral feedback on how to organize recruitment efforts. Researchers also hoped the WILIS study would address the need for recruiting a more diverse workforce, in regards to ethnicity, race, gender, age, and other factors, to reflect the diversity of the patrons they serve (Morgan, Farrar, & Owens, 2009).

According to the articles and scholarly texts analyzing the WILIS 1 data, survey participants were motivated to enter the library and information science field for a variety of reasons. Although some of these motivating factors differed by setting or library type,

Rathbun-Grubb and Marshall (2009), Solomon and Rathbun-Grubb (2009), and Moran, Marshall, and Rathbun-Grubb (2009) report that most respondents were inspired to become librarians because the career was a good fit for their interests, they enjoyed a previous work experience in a library, the job would allow them to “make a difference,” and they liked working with people.

In isolating the scientists-turned-librarians from the other librarians and analyzing their responses, Walker (2010) found that these librarians were also motivated to join the workforce because a career in librarianship fit their interests (more than 60%) and they had previous work experience in a library (more than 50%). However, Walker found that these librarians were less motivated than other librarians by the desire to “make a difference” or work with people. Differences even existed with the participants’ science concentrations as librarians with computer science and math backgrounds were less likely to be socially motivated than those with health or science education (Walker, 2010). Walker found that “those with a science background were far less likely to cite they had ‘always wanted to be a librarian;’ however, once they became aware of the intrinsic benefits of an LIS career, they embraced it wholeheartedly and never looked back” (p. 94).

Rathbun-Grubb (2009) took a different perspective, analyzing the responses of WILIS 1 participants who had left the library field in order to study the determinants and consequences of their leaving. Those who left the library field were less likely to have entered an LIS program because they had worked as an assistant in a library prior to the program, “always wanted to be a librarian,” or had a family member or friend in the LIS profession (Rathbun-Grubb, 2009). Those who left or intend to leave the library

profession had a bit higher percentage in the motivation factors of liking to work with people and wanting to make a difference (Rathbun-Grubb, 2009). Interestingly, the inspiration of entering an LIS program because it was a good fit for their interests was high, in the 90th percentile, for all categories from those intending to stay to those who had already left (Rathbun-Grubb, 2009).

Education

As a part of the WILIS study, researchers set out to gather data about the educational histories of a large cohort of LIS graduates in the hopes that the LIS programs could better assess their performance in preparing students for the changing work environment as well as guide their decisions and policies toward effective educational planning (Marshall et al., 2009a; Marshall et al., 2009b). This data could also be used to help programs meet the *Standards for Accreditation of Master's Programs in Library & Information Science*, which ensure the educational quality of LIS programs through judging elements such as curriculum, evaluation methods, faculty, resources, and admission requirements (Committee on Accreditation of the American Library Association, 2015; Marshall et al., 2009a). The WILIS 1 survey addressed several aspects of education, including the education section where respondents were asked questions about the degrees they have obtained or are trying to complete (up to six), a section on continuing education where respondents were asked how they value and participate in professional development, and a section on the quality of LIS programs where respondents who recently graduated answered questions assessing the program they attended (Marshall, Rathbun-Grubb, & Marshall, 2009; School of Information & Library Science [SILS], 2009).

When the WILIS 1 survey asked recent graduates to assess the education they received from their LIS program, almost all respondents reported that their programs had provided them with a basic knowledge of their field (99%), information seeking skills (97%), skills they can apply to their jobs (95%), and research and evaluation skills (95%) (Marshall et al., 2009b). In contrast, skills that were rated low were business skills (48%), leadership skills (70%), and management skills (74%) (Marshall et al., 2009b). Data from these recent graduates also highlighted how their LIS education encouraged them to develop a commitment to the public's right to access information (97%), intellectual freedom (96%), and protecting user confidentiality and privacy (95%); while fewer respondents reported that their programs encouraged them to value/promote informed citizens for democracy (87%), diversity (87%), and social responsibility (88%) (Marshall et al., 2009b). According to the WILIS 1 results, most surveyed alumni (70%) thought formal continuing education courses, particularly in technology (91%) and subject expertise (84%), were important for staying up-to-date in their field (Marshall et al., 2009a). Rathbun-Grubb (2009) found that professionals who left the library field still valued the education they received from their LIS program because 60% ($n = 128$) of these former librarians are "still using their LIS skills or are working in closely associated fields such as bookselling, publishing, information technology, or research" while 73% cited "information services, education, and research as an area of responsibility in their current job" (p. 145).

When the WILIS 2 survey was conducted, graduates rated their LIS programs' provision the highest in the areas of basic knowledge of the field, information seeking, ethics, values and foundational principles of the LIS profession, and intellectual freedom;

while budget/finance and communication were rated the lowest (Marshall, Morgan, Rathbun-Grubb, Marshall, Barreau, Moran, Solomon, & Thompson, 2010). When asked about their comfort level with various technologies, most reported that their comfort was increased while in their LIS program: 71% with basic information tools (e.g., word processing, databases, servers, website design) and 44% with advanced information tools (e.g., programming, networking, data mining) (Marshall, Morgan, et al., 2010). There was some variation in the types of capstone experiences implemented at the 39 participating programs across the United States and Canada. Completion of a practicum, field experience, or work experience in an LIS setting, even when it was not required, was reported by the highest proportion of graduates (88%) and was cited as being the most beneficial experience available (Marshall, Morgan, et al., 2010). While only 15% of respondents reported completing a master's paper or thesis, it was reported as the second most beneficial capstone experience (Marshall, Morgan, et al., 2010). Thirty percent were required to take a comprehensive exam and 34% completed a portfolio (Marshall, Morgan, et al., 2010).

Career History

Rathbun-Grubb (2009) explained that "career trajectories can be determined from the detailed accounts of respondents' educational backgrounds and work histories" (p. 25). As a part of WILIS 1 and WILIS 2, the heads of LIS programs were surveyed and gave feedback on the importance of the implementation of a shared alumni tracking system (Marshall et al., 2009b). Marshall et al. (2009b) found that 98% of the LIS program heads thought it was important to track the careers of their alumni and 95% reported that they were already collecting some information. The WILIS team hoped that

the study's findings would exemplify the benefit of how "gathering in-depth career data to gain an understanding of the factors that affect the work trajectories of librarians" would be an integral development in the library profession (Marshall, Rathbun-Grubb, Barreau, & Morgan, 2010, p. 4). Marshall et al. (2009a) explained that their aim for WILIS 1 was to deepen their understanding of what happens to LIS graduates over time and determine how personal, organizational, and social factors impact an individual's career trajectory and the overall LIS workforce composition.

In order to develop an understanding of graduates' career histories, the WILIS 1 survey asked respondents questions about their: (1) job before entering their LIS program; (2) job after graduating from the LIS program; (3) longest job; (4) highest-achieving job; and (5) current job (or previous job if they were not employed at the time of the survey) (Marshall et al., 2009a, p. 145). Data from both open-ended and closed questions about these jobs allowed researchers to compare and analyze these graduates' careers as well as develop a more complete picture of participants' working life and any employment patterns among age and gender groups as well as library settings (Marshall, Rathbun-Grubb, & Marshall, 2009). WILIS researchers did not want to ask respondents to identify their entire work history, because some, particularly the older participants, could have had up to 40 years of jobs since their graduation from an LIS program. Since their intention was to gain an understanding of the breadth of the participants' careers, the survey only addressed certain elements to assess each job's quality, like job title/description, compensation, benefits, job satisfaction, work setting, and reasons for leaving (Morgan, Marshall, et al., 2009; Marshall, Rathbun-Grubb, & Marshall, 2009). More specific questions about job functions, work environment, benefits, career

development, retirement plans, and views on older and younger workers were asked in the sections for current job or previous job for those not working (Morgan, Marshall, et al., 2009; Marshall, Rathbun-Grubb, & Marshall, 2009). Survey questions also addressed breaks in employment by asking participants to specify the duration and reason for unemployment (i.e. maternity/paternity leave, childcare, care for other family members, household responsibilities, poor health, disability, involuntary unemployment, career training, sabbatical/leave, and leisure activities) (Marshall, Rathbun-Grubb, & Marshall, 2009).

Walker (2010) stated, “Most information professionals did not go straight from high school to undergraduate education to a master’s program” (p. 45). According to the WILIS 1 results, the average age at graduation from the LIS program was 32.7; indicating that many people enter the field later in life, most likely as a second career (Marshall et al., 2009b; Marshall, Rathbun-Grubb, et al., 2010). WILIS 2 data also showed that most recent graduates were entering the LIS field as a second career (Marshall, Morgan, et al., 2010). Since a large proportion of the graduates were women, WILIS researchers found the LIS workforce to be impacted by career interruptions, because women are more likely to leave work due to family caregiving responsibilities or spousal relocations (Marshall et al., 2009b; Marshall, Rathbun-Grubb, et al., 2010; Morgan, Marshall, et al., 2009). Marshall et al. (2009b) found that library employers are concerned about the reduction of the potential labor pool, because many graduates have chosen to work outside of libraries, especially since the inclusion of information science training has broadened the range of possible job opportunities and work settings.

Job Satisfaction

Job satisfaction is a key component of workforce retention and recruitment in any career field, especially in librarianship because of the potential for workforce shortages. In order to illustrate the complex set of factors that influence workforce recruitment and retention behavior, the WILIS 1 research team designed their long-term career retrospective survey using the life course approach framework (Marshall et al., 2009a; Marshall, Rathbun-Grubb, & Marshall, 2009; Morgan, Marshall, et al., 2009). This life course perspective, often used in the social sciences to study occupational careers, is new to library science research (Marshall et al., 2009a; Morgan, Marshall, et al., 2009). The life course perspective “provides a lens through which the entirety of individual lives can be seen in several contexts” (Marshall, Rathbun-Grubb, & Marshall, 2009, p. 128). By implementing this perspective, the WILIS data was able to capture the participants’ experiences over time, examining their stability and change in occupational careers as well as their linkages between other people and social institutions in the overall context of changing demography, social conditions, and historical events (Marshall et al., 2009a; Marshall, Rathbun-Grubb, & Marshall, 2009; Morgan, Marshall, et al., 2009).

Overall, library and information science professionals appear to be satisfied with their jobs and careers (Marshall et al., 2009a; Marshall et al., 2009b; Marshall, Morgan, et al., 2010). According to WILIS 1 data, career satisfaction rates appear to be high for recent graduates, with 94% indicating that they agree (52%) or strongly agree (45%) that they are satisfied with LIS as a career (Marshall et al., 2009a; Marshall et al., 2009b). According to WILIS 2 data, over 87% agreed or strongly agreed that they are satisfied with what they do in their current job and 84% even reported that they have encouraged

others to choose LIS as a career (Marshall, Morgan, et al., 2010). Only 6% of recent graduates surveyed during the WILIS 2 stated that they plan on leaving the LIS field within a year (Marshall, Morgan, et al., 2010). Some key elements that determine the level of job satisfaction among librarians are: salaries, autonomy, opportunities for upward mobility, continuing education opportunities, and the impact of information technology, particularly on older workers (Marshall et al., 2009a; Marshall, Rathbun-Grubb, & Marshall, 2009; Rathbun-Grubb & Marshall, 2009). The lack of career development and advancement is an important concern among librarians as they report dissatisfaction with employer support and the lack of opportunities available for promotion in the LIS field given their education, skills, and experience (Rathbun-Grubb & Marshall, 2009).

Although few respondents were dissatisfied with their LIS career, Marshall et al. (2009a) found that there are small but significant differences between several groups, specifically across gender and racial/ethnic groups. According to WILIS 1 data, 5% of whites versus 10% of nonwhites reported that they were dissatisfied with their LIS career ($\chi^2 = 8.9, p < .05$), and 4% of women versus 8% of men reported dissatisfaction ($\chi^2 = 30.1, p < .01$) (Marshall et al., 2009a). In terms of dissatisfaction at their current job, significant differences also existed between whites (10%) and nonwhites (20%) ($\chi^2 = 15.9, p < .01$) (Marshall et al., 2009a). Age did not appear to be a significant factor in determining job or career satisfaction (Marshall et al., 2009a). In analyzing the responses of participants who left librarianship, Rathbun-Grubb (2009) found a common theme of mismatches between the individuals and their jobs in the areas of “family, geography, schedule/earnings/skills, the work environment, work relationships, and opportunities for

career advancement” (p. 90). Library setting can also be a factor that impacts their decision to leave, because 80% of the librarians who reported they intend to leave librarianship work in academic libraries (49%) and special library or archive settings (31%) (Rathbun-Grubb, 2009). Understanding why these librarians have chosen to leave librarianship may provide information on how to improve the profession in order to retain current professionals as well as recruit a new workforce (Marshall et al., 2009a).

Summary

Marshall, Rathbun-Grubb, Barreau, and Morgan (2010) conclude that “library and information science workforce research is burgeoning at this opportune time to help the profession identify and utilize a base of evidence to inform workforce and education planning to meet the challenges of an aging and diversifying workforce and the uncertain long-term effects of the current economic turbulence” (p. 5). As multiple organizational, social, and economic factors began to impact the LIS workforce, the WILIS team felt that it was imperative to create a transferrable alumni-tracking tool, so data could be collected on library professionals to provide evidence-based educational and workforce planning (Marshall et al., 2009b; Rathbun-Grubb, 2009). This workforce planning is integral to the future of librarianship as we begin to understand where librarians have been, where they are now, and where they are going. This is particularly true in the field of special librarianship.

Since the time when special librarians split from the American Library Association forming their own support organization, special libraries have been distinct from other types of traditional libraries, but also so specialized that each special library is very different from other special libraries. From Dana’s (1910) library for “men of

affairs” (p. 5) to the simplified “any library that doesn’t fall into the academic, public, or school categories” (Murray, 2013, p. 274), special libraries have been difficult to cohesively define. Even the term “library” is becoming outdated, because more and more special librarians are working outside the library in information centers and other organizations/businesses (Hunt, 2013). These new opportunities and unique possibilities in special librarianship make it even more important for LIS programs to be able to track what their graduates are doing and where they are working. By gathering and presenting data about special librarians to other practicing librarians as well as students and prospective librarians, they can learn more about the special librarianship and decide if it is something that they would like to pursue as a career. The aim of this study is to gain insight into who these librarians are and to find out what makes them so “special.”

Research Questions

By studying a sample of special librarians, the following research questions were addressed:

- What inspired/motivated these professionals to become special librarians and how does this compare to other librarians?
- What education, training, and professional development prepared these individuals for a career in special librarianship and how does this compare to other librarians?
- What type of jobs have comprised the career histories of these special librarians and how does this compare to other librarians?
- What are the levels of job satisfaction in their current special library positions and how does this compare to other library positions?

Methods

This study is a secondary analysis of the Workforce Issues in Library and Information Science (WILIS) 1 study data. In order to gain a deeper understanding of the profession of special librarianship, the responses from special librarians were isolated from those of the “other” more traditional librarians to create a data subset for a series of analyses. The four research questions listed above provided guidance for the selection of variables and the direction of these statistical analyses. Responses involving demographics, inspiration, education, career history, and job satisfaction served as keys to learning more about special librarianship and determining the aspects that make special librarians so “special.”

Data Source

The WILIS 1 and 2 de-identified datasets and codebooks are publicly available on the website of the Odum Institute for Research in Social Science UNC WILIS Dataverse (Odum, 2016). Of the three studies comprising the WILIS project, the WILIS 1 was chosen as the specified dataset for this paper. In addition to the studied population providing a comprehensive outlook on librarians due to the wide expanse in their years of experience, the research goals and the survey questions in the WILIS 1 closely matched the proposed research areas of this paper. The WILIS 1 survey data was downloaded in SPSS format on February 9, 2017 from the UNC WILIS Dataverse (SILS, 2009).

According to the WILIS 1 (SILS, 2009) Codebook and Toolkit (Workforce Issues in Library and Information Science [WILIS] Team, 2008), the survey questions addressed the following topics:

- Education & Demographics (Section A)
- Career Outline (Section B)
- Job Detail (Sections:
 - C – Job Before LIS Program;
 - D – Job After LIS Program;
 - E – Status of Unemployment (only completed by those not working);
 - F – Current Job;
 - G – Last/Previous Job;
 - H – Longest Job; and
 - I – Highest Achieving Job)
- Life and Work: Breaks in Employment (Section J)
- Overall Career: Job Quality and Satisfaction (Section K)
- Continuing Education (Section L)
- Future of LIS (Sections:
 - M – Future of LIS and
 - N – Return to LIS work (only completed by those who left the field))
- Recent Graduates (Sections:
 - P – Application Process for LIS Program;
 - Q – Quality of LIS Program; and
 - R – Post-Program Job Search and Connection to Program)

The web-based survey was very long (98 pages when printed) and consists of complex skip patterns with closed and open-ended questions (Morgan, Marshall, J., Marshall, V., & Thompson, 2009; Walker, 2010). Depending on their career length, the survey took respondents approximately 30 to 60 minutes to complete (Marshall et al., 2009a; Marshall, Rathbun-Grubb, & Marshall, 2009). The web survey's initial response rate was at 35.4% ($n = 2,682$); however 29 respondents did not complete at least Section A: Education, so these were not counted in the final total (Morgan et al., 2009). Thus, the final response rate for the WILIS 1 was 35.1% ($n = 2,653$) (Morgan et al., 2009).

Research Sample

The WILIS 1 Team (2008) surveyed alumni who graduated from one of the six North Carolina LIS programs between 1964 and 2007:

- Appalachian State University Library Science Program
- East Carolina University Department of Library Science and Instructional Technology
- North Carolina Central University School of Library and Information Sciences
- UNC-Chapel Hill School of Information and Library Science
- UNC-Greensboro Department of Library and Information Studies
- Central Carolina Community College Library and Information Technology Program (Library Technician Associate)

These alumni were included even if they no longer worked in the library and information science field. The five LIS graduate programs were represented with response rates ranging from 27% to 43% of their graduates in the sample (Morgan et al., 2009).

Demographic data was collected on the respondents. Ages ranged from 23 to 88 years old with a mean of 50 (std. dev. = 12) and a median of 52. Race/ethnicity included 89% white; 7% African-American; 2% Chinese; 2% American Indian; 1% Hispanic, Spanish or Latino; and 2% non-U.S. citizens (Morgan et al., 2009). Alumni were predominately female (82%) and married or living with a partner (70%) (Morgan et al., 2009). Of the 2,653 total respondents, 1,515 were working in libraries at the time of the survey (Marshall et al., 2009a; Moran et al., 2010). The largest proportion of these librarians were working in school libraries (33%), followed by academic (31%), public (20%), and special libraries (16%) (Marshall et al., 2009a; Moran et al., 2010). The average salary for librarians was \$51,952 while those working outside of libraries earned an average of \$73,471 (Marshall et al., 2009a).

The aim of this paper's study was to analyze data on the special librarian respondents. Thus, the responses from the special librarians were isolated from those of the "other" more traditional librarians to create a separate subsample. The process of isolating this study population involved creating groups based on how they answered the following questions:

- Preferred Type of Workplace when in Library School (A9_reco)
- Current Job (libtype)

In order to meet the criterion of a special librarian, their answers included any of the following: Health/Medical Library, Law Library, Corporate Library, Federal, State or Local Government Library, or Other Special Library. These values were recoded into the representation of "Special Librarian." The variable of *Preferred Type of Workplace when in Library School* was chosen as criterion, because these respondents, by specifying that

they were interested in working in a special library setting during library school, demonstrated how the choice of special librarianship impacted their inspiration and education as well as future jobs. Although many questions were asked about employment positions, the variable of *Current Job* was chosen as criterion for most of the analyses because the respondents' current place of work demonstrates the present state of special librarianship. By analyzing the inspiration, education, career path, and job satisfaction of current special librarians, present trends and relationships were exhibited. Additionally, the WILIS 1 survey asked more detailed questions about the respondents' current position than other jobs, so using this response would provide additional explanations and allow for more comparisons (Morgan, Marshall, et al., 2009).

Data Collection

In order to gain an understanding of special librarians and to determine if any conclusions could be made about their inspiration, education, career path, and job satisfaction; the following variables were analyzed for each research question:

- Demographics
 - A17: Year of birth
 - age_at_g: Age at graduation
 - year_gra: Year of LIS graduation
 - A20: Sex
 - F5: Current salary
 - A19.1-2: Race/Ethnicity
 - A21: Relationship status
- Research Question 1 – Inspiration

- A6a-k: Factors affecting decision to enter an LIS program
- A7a-g: Motivating factors to enter an LIS program
- Research Question 2 – Education
 - A10: Total number of degrees
 - A11b, A12b, A13b, A14b, A15b, A16b: Six most recent degree types
 - F16: Important LIS skills
 - L1a-c: Training methods
 - L11 1-7, L12a-b, L13a-e: Continuing education
- Research Question 3 – Career History
 - C1a: Job type before LIS program
 - D1a: Job type after LIS program
 - F1a: Current job type
 - F34, K3: Career trajectory
 - F33: Number of jobs with current employer
 - H1a: Longest job
 - I1a: Highest-achieving job
- Research Question 4 – Job Satisfaction
 - K1a-j, K2a-i: Elements of job satisfaction
 - F36a-b, d-e: Components of job satisfaction in current position
 - F36c: Overall job satisfaction
 - F37, F38a-d: Opinion of current job

Out of the 1,594 variables available on the downloaded WILIS 1 dataset, approximately 88 were chosen for analysis during this study. Analyzing the collected data on how the

special librarians answered the aforementioned questions provided comprehensive information about what makes special librarians so “special.” This study looked for any patterns among the special librarians while also making comparisons between their answers and those from other librarians.

Data Analysis

All statistical analyses were conducted using the IBM SPSS Statistics Version 24 software with chi-square tests or t-tests, depending on the purpose of analysis and the type of data available. Both types of tests compared special librarians to other librarians. Chi-square tests were used for categorical or nominal data while t-tests were used for continuous data. For both the chi-square and t-tests, $p < 0.05$ was the criterion for statistical significance. Chi-square tests were performed as cross-tabulations with the option to display percentages by columns to compare them. Independent-samples t-tests were used to compare the means in an analysis involving numerical data. When conducting these analyses, some variables required recoding either to create the groupings of *Special Librarians* and *Other Librarians* or to address missing answers due to respondents choosing to skip the question or not receiving it because of the skip patterns designed in the survey. Five sets of analyses, including one on demographics and the other four to address each research question, were conducted using the data collected from the WILIS 1 survey.

The first analysis conducted for this study involved several tests on demographic factors, including age, LIS graduation year, salary, sex, and relationship status. By analyzing these demographics a basic picture of the two librarian types were formed. The respondents’ current job was used as the criterion to create the sample selection for

these analyses. Comparisons were made in order to determine if there were any similarities or statistically significant differences between the two types of librarians: special and other. Either chi-square tests or t-tests performed depending on the type of data. For example, age and salary were compared for special and other librarians using t-tests since this involved continuous data while analyses on race, graduation years, and relationship status involved chi-square tests since the data is categorical/nominal.

The next set of analyses addressed this study's first research question and involved running tests on inspirational factors in order to learn what would motivate someone to want to become a special librarian. Each analysis in this section was conducted using chi-square tests because all of the inspiration factors were categorical in nature. Respondents were asked to rate several inspiring factors, including "like working with computers" and "always wanted to be a librarian," with values ranging from "Not at all," "A little," "A moderate amount," to "A lot." Each variable was actually tested twice using the two sets of sample selection criteria. The first set of tests used the criterion of the type of library where respondents hoped to work while they were in library school. Using this criterion allowed comparisons of the motivations between those who wanted to work in special libraries with those who wanted to work in a more traditional setting, which would suggest why each type wanted to work in the setting they did. The second set of tests in this section were conducted using the same inspiring factors, however the sample selection involved the criterion of the respondents' current job type at the time of the survey. Results from the analyses using this criterion created a picture of the motivations of those who have experience working in special libraries.

The third set of analyses addressed the second research question and involved running tests on variables that addressed education, training, and continuing education/professional development. This section mostly involved chi-square tests, except for a few mean comparisons on the number of degrees and continuing education hours which both used t-tests. The criterion of the respondents' current job was used to create the sample selection for these analyses. In order to create an understanding of the education of special librarians, their educational history (six most recent degrees) was analyzed. Comparisons were made to determine if there were statistically significant differences or patterns between the two types of librarians. Skills involved in librarianship were also analyzed to determine which ones were most important for special librarians. This knowledge would help aspiring special librarians, so they could make class/training decisions that would impact their future success with a career in special librarianship. Factors that motivated librarians to participate in continuing education, like recertification and networking opportunities, were also analyzed by librarian type. Detailed analysis of areas, like technology, management, and finance, where librarians were interested in gaining continuing education experience were completed. Whenever there was a significant statistical difference between special and other librarians, this area was further explored to pinpoint how special librarians valued it.

Respondents' career history was addressed in the next set of analyses in order to answer research question three. The WILIS 1 survey addressed several variables about the jobs that made up respondents' career history, particularly their jobs before and after library school as well as their current one. This section of analyses involved two sets of tests just like the inspiration results section. The criterion of the library type in which

respondents hoped to work while they were in library school was the first one used to create the sample selection and their current job type served as the criterion for the second set of tests. By looking at the three tested job types (before/after LIS school and current) with the different lenses that the two sample selections provided, much can be learned about the differences between not only special and other librarians, but between those who had aspired to be special librarians and may not have actually worked in a special library and those who have been employed in one. Chi-square testing was used for almost all the tests in this section, except for one t-test conducted to compare the average number of positions both types of librarians had within the organization in which they are currently employed. Many of the tests in this section analyzed one of the three job types by first defining these jobs by whether the respondents worked in one of the following: a library using LIS skills, a library not using LIS skills, a non-library setting using LIS skills, a non-library setting not using LIS skills, a self-employed position, or a job unlike any of these mentioned. Further analysis was then conducted on the respondents who had answered that they had worked in a library setting (either using or not using LIS skills). These tests did not address those who worked in non-library settings, were self-employed, or had a unique job. After these three job types were addressed, professional movement or career trajectories were analyzed. Questions involved respondents choosing the appropriate description of their career movement either with their current employer or entire work history. The last two tests were conducted to analyze the longest and highest-achieving positions special librarians had. Comparisons between special and other librarians were not made with these two analyses. Frequency tables identifying the special library setting, including

health/medical, law, corporate, and federal libraries, that was chosen as either the longest or highest-achieving were presented.

The last section of analyses in this study addressed the fourth research question through providing information on how respondents answered questions involving job characteristics they value, their rating of elements that comprise job satisfaction, how they view their current job, and their overall job satisfaction. Chi-square testing was used to complete all of the analyses in this section and the criterion of respondents' current job was used to create the sample selection. Many of the questions implemented rating factors through value-systems involving either ranges of importance from "Not at all important" to "Very important" or agreement from "Strongly disagree" to "Strongly agree." The final test completed simply addressed whether librarians were satisfied with their jobs. Comparing how the two types of librarians responded to these questions revealed a great deal about what they value in a job, what they think about their career, and how satisfied they are with their present job. By analyzing these tests, much can be learned about the library profession as a whole as well as specifics about special librarians.

Results

This study is comprised of five sets of analyses starting off with developing a picture of the respondents through demographic testing then collecting information to answer the four research questions focused on the inspiration, education, career history, and job satisfaction of librarians, particularly those working in special libraries. Results from statistical testing are presented in tables. With many of the variables, tables often present how special librarians answered a question or rated a set of factors. Asterisks (*) are used in the tables to denote that statistical testing found a significant difference ($p < 0.05$) between special and other librarians in that category. Tables showing the complete chi-square tests for each of these statistically significant categories normally follow the comprehensive tables. These tables display how the special librarians differed from librarians who chose to work in more traditional settings. In the chi-square tables, a subscript “a” or “b” follows the number of respondents in the category. These subscript letters designate the areas of potential statistically significant differences. If the p value is less than 0.05, then a row that has an “a” and “b” is where the differences between the librarian types are statistically significant. Two “a’s” mean that the row is not where the statistically significant differences were found. At the bottom of the chi-square tables, details, including the p value, the degrees of freedom (df), and the chi-square value (χ^2) are displayed. Additionally, some of the tables often simply show how both special and other librarians answered the survey questions with the number of respondents and/or the percentages. This allowed for side-by-side comparisons. All analyses in this study were

conducted with the purpose of gaining more knowledge about special librarians and the unique profession of special librarianship.

Demographics

In order to gain an understanding of the sample of special librarians, a few demographic tests comparing them to other librarians, involving age, graduation year, annual salary, sex, ethnicity, and relationship status were conducted. The criterion used to create the two groups was the respondents' current job. The analyses of age, age at graduation, and annual salary all involved t-tests since the variables were continuous.

Table 1 shows the results of these tests.

Table 1. *Comparison of Means for Special and Other Librarians*

Demographics	Means		Difference (p)
	Other Librarians	Special Librarians	
Age	47.99	46.36	0.040*
Age at Graduation	33	31.01	0.000*
Annual Salary	\$46,188.45	\$58,070.52	0.000*

* $p < 0.05$

The average age of special librarian respondents was about 46 years old while the other librarians were about 48 years old. The t-test conducted on this comparison found the results statistically significant ($p = 0.040$) with special librarians being more than a year and a half younger than other librarians. The respondents' age when they graduated from their LIS program was also analyzed. The results showed that the average age for special librarians at their graduation was 31 years old while other librarians were 33. The t-test conducted showed that this two-year difference is statistically significant ($p = 0.000$). Current salary was another demographic aspect that was analyzed to learn how special librarians compare with those in the more traditional settings. It was discovered that

other librarians have an average salary of \$46,188.45 while special librarians earn about \$11,882.07 more with salaries averaging \$58,070.52. This difference was found to be statistically significant ($p = 0.000$).

The years the respondents graduated from their LIS program and the number of graduates were also analyzed to determine if there were any significant differences or patterns in the graduation rate between the two types of library settings. After running a chi-square test on every graduation year between 1965 and 2007, no significant statistical differences ($p = 0.680$) were found. Therefore, a similar percentage of graduates from each library setting was represented each year. The gender of the librarian respondents was also analyzed using a chi-square test to identify if there were any significant differences between special and other librarians (Table 2). Overall, there were significant statistical differences ($p = 0.007$). Although, females comprised the majority of librarians in both settings: 77% in special and 84.1% in other, males had a statistically significant higher percentage in special libraries than the other traditional settings. In fact, there were 7.1% more males in special libraries.

Table 2. *Sex and Type of Librarian Cross-tabulation*

Sex		Other Librarians	Special Librarians	Total
Male	Count	200 _a	56 _b	256
	% within libtype	15.9%	23.0%	17.1%
Female	Count	1058 _a	187 _b	1245
	% within libtype	84.1%	77.0%	82.9%
Total	Count	1258	243	1501
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 7.354$, $df = 1$, $p = 0.007$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at .05 level.

Racial/ethnic identity was a demographic that was addressed in the WILIS 1 survey. Respondents were asked to mark one or more races to indicate what they considered themselves to be. Respondents' answers were then coded and variables were created reflecting their choices. Non-minority reflected those who chose *White* as their race and minority reflected those who selected any other racial group. Chi-square tests on both variables revealed that special and the other librarians had similar percentages of racial representation. In both settings, the non-minority group had an extremely higher percentage of representation (>81% in the traditional and >73% in special libraries) than the minority group. Although the percentages were different with special librarians having more librarians from a minority racial group, the differences were not statistically significant.

Relationship status was another demographic aspect measured in the survey questions. Respondents were asked to identify whether they were single (never married), married or living with a partner, divorced/separated, or widowed. According to the chi-square test conducted on the relationship status variable comparing special and other librarians, it was found that the two settings did significantly differ overall ($p = 0.036$), specifically with the statuses of single (never married) and married or living with a partner. The statuses of divorced/separated and widowed, however, did not have significant statistical differences. Special librarians had 6.5% more single respondents while other librarians had 7% more married respondents. Special librarians are statistically more likely to be single and other librarians are more likely to be married.

Table 3. *Comparison of Relationship Status between Special and Other Librarians*

Relationship Status		Other Librarians	Special Librarians	Total
Single (never married)	Count	233 _a	61 _b	294
	% within libtype	18.6%	25.1%	19.6%
Married or living with a partner	Count	874 _a	152 _b	1026
	% within libtype	69.6%	62.6%	68.5%
Divorced/Separated	Count	128 _a	29 _a	157
	% within libtype	10.2%	11.9%	10.5%
Widowed	Count	20 _a	1 _a	21
	% within libtype	1.6%	0.4%	1.4%
Total	Count	1255	243	1498
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 8.541$, $df = 3$, $p = 0.036$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

Research Question 1 - Inspiration

Analyses were conducted in order to determine what motivated the surveyed special librarians to choose their career in special librarianship. Respondents were asked to rate a series of motivating factors to determine which ones served as their inspiration to enter the LIS program. In order to develop an understanding of what would motivate someone to choose a career in special librarianship, initial testing involved isolating the respondents who stated they wanted to become a special librarian while they were in library school.

Table 4 shows the percentages of how these respondents rated the surveyed motivating factors. Library students who wanted to become special librarians were motivated to enter library school because they thought librarianship was a good fit for their interests (62.5%), they had previously worked as a library assistant (41.2%), they liked working with people (34.3%), they wanted a job where they could make a difference (33.9%), and they wanted flexible career options (26.7%).

Table 4. *Inspirational Factor Ratings of Prospective Special Librarians*

Inspiring Factor	Not at all	A little	Moderately	A lot
Guidance counselor in high school	97.0%	1.7%	1.0%	0.3%
Family member or friend worked in LIS	59.8%	10.0%	10.6%	19.6%
A friend or family recommended LIS	57.2%	13.7%	11.7%	17.4%
Always wanted to be a librarian*	53.2%	20.1%	14.0%	12.7%
It seemed like a good fit for my interests	4.0%	4.7%	28.9%	62.5%
Like working with computers	47.5%	18.7%	21.4%	12.4%
Like working with people*	15.7%	19.3%	30.7%	34.3%
Wanted a job where I could make a difference	15.0%	20.9%	30.2%	33.9%
Recruited by LIS program	93.0%	3.7%	2.0%	1.3%
Worked as an assistant in a library or information center*	40.2%	8.3%	10.3%	41.2%
Volunteered in a library or information setting	67.8%	13.3%	10.0%	9.0%
Length of training	42.4%	19.2%	27.2%	11.3%
Flexible education options for working adults*	55.3%	8.3%	14.6%	21.9%
Availability of jobs	24.8%	20.9%	30.1%	24.2%
Salary	50.3%	25.0%	19.0%	5.7%
Benefits*	58.9%	18.2%	17.5%	5.3%
Flexible career options*	21.8%	23.8%	27.7%	26.7%
An LIS career fits with my family responsibilities*	61.9%	14.2%	12.3%	11.6%

* $p < 0.05$ (Chi-square testing was used to compare these respondents against others)

Chi-square testing was conducted to compare the answers of these prospective special librarians with those who wanted to pursue careers in other more traditional library settings. Tables 5 – 11 reveal the motivating factors that had differences that were measured to be statistically significant at $p < 0.05$. Table 5 shows that chi-square testing revealed statistical significance ($p = 0.005$) with the respondents' rating of how much they were inspired by the fact that they had always wanted to be librarians. Those who wanted to be special librarians while in library school were less motivated by this factor. Ten percent more special librarians chose "Not at all" while 5% more other librarians rated it higher by choosing "A lot."

Table 5. *Cross-tabulation of “Always Wanted to be a Librarian”*

Rating		Other Librarians	Special Librarians	Total
Not at all	Count	983 _a	159 _b	1142
	% within A9_reco	42.5%	53.2%	43.7%
A little	Count	546 _a	60 _a	606
	% within A9_reco	23.6%	20.1%	23.2%
A moderate amount	Count	377 _a	42 _a	419
	% within A9_reco	16.3%	14.0%	16.0%
A lot	Count	409 _a	38 _b	447
	% within A9_reco	17.7%	12.7%	17.1%
Total	Count	2315	299	2614
	% within A9_reco	100.0%	100.0%	100.0%

($\chi^2 = 13.008$, $df = 3$, $p = 0.005$) Each subscript letter denotes a subset of A9_reco categories whose column proportions do not differ significantly from each other at the .05 level.

The motivating factor of respondents choosing a career in librarianship because they liked working with people resulted in statistically significant differences ($p = 0.001$) between the ratings of the prospective special librarians and the others (Table 6). Those who wanted to work in a more traditional library setting were more inspired by the fact that librarianship would allow them to help people. Five percent more special librarians rated this factor as “Not at all” while 6% more traditional librarians rated it with “A lot.”

Table 6. *Cross-tabulation of “Like Working with People”*

Rating		Other Librarians	Special Librarians	Total
Not at all	Count	248 _a	47 _b	295
	% within A9_reco	10.7%	15.7%	11.3%
A little	Count	304 _a	58 _b	362
	% within A9_reco	13.1%	19.3%	13.8%
A moderate amount	Count	833 _a	92 _a	925
	% within A9_reco	35.9%	30.7%	35.3%
A lot	Count	934 _a	103 _b	1037
	% within A9_reco	40.3%	34.3%	39.6%
Total	Count	2319	300	2619
	% within A9_reco	100.0%	100.0%	100.0%

($\chi^2 = 17.722$, $df = 3$, $p = 0.001$) Each subscript letter denotes a subset of A9_reco categories whose column proportions do not differ significantly from each other at the .05 level.

Whether or not respondents were inspired by their previous work as an assistant in a library or information center was tested using chi-square testing (Table 7). This test revealed that special librarians were more likely to be inspired by this factor as 8.3% more rated it in the “A lot” category ($p = 0.037$). Six percent fewer special librarians rated this factor in the “Not at all” category.

Table 7. *Cross-tabulation of “Worked as Assistant in Library/Information Center”*

Rating		Other Librarians	Special Librarians	Total
Not at all	Count	1071 _a	121 _b	1192
	% within A9_reco	46.2%	40.2%	45.5%
A little	Count	196 _a	25 _a	221
	% within A9_reco	8.5%	8.3%	8.4%
A moderate amount	Count	288 _a	31 _a	319
	% within A9_reco	12.4%	10.3%	12.2%
A lot	Count	763 _a	124 _b	887
	% within A9_reco	32.9%	41.2%	33.9%
Total	Count	2318	301	2619
	% within A9_reco	100.0%	100.0%	100.0%

($\chi^2 = 8.498$, $df = 3$, $p = 0.037$) Each subscript letter denotes a subset of A9_reco categories whose column proportions do not differ significantly from each other at the .05 level.

Another motivating factor that had statistical significance ($p = 0.029$) among how the librarians from each setting rated it was whether they were inspired by the flexible education options that a career in librarianship could provide (Table 8). When compared to other librarians, special librarians were less likely to uphold this option as a motivating factor since 8.5% more respondents rated this in the “Not at all” category.

Table 8. *Cross-tabulation of “Flexible Education Options for Working Adults”*

Rating		Other Librarians	Special Librarians	Total
Not at all	Count	1088 _a	167 _b	1255
	% within A9_reco	46.8%	55.3%	47.8%
A little	Count	281 _a	25 _a	306
	% within A9_reco	12.1%	8.3%	11.7%
A moderate amount	Count	407 _a	44 _a	451
	% within A9_reco	17.5%	14.6%	17.2%
A lot	Count	547 _a	66 _a	613
	% within A9_reco	23.5%	21.9%	23.4%
Total	Count	2323	302	2625
	% within A9_reco	100.0%	100.0%	100.0%

($\chi^2 = 9.028$, $df = 3$, $p = 0.029$) Each subscript letter denotes a subset of A9_reco categories whose column proportions do not differ significantly from each other at the .05 level.

Benefits was a motivating factor that had statistical significance ($p = 0.004$) among the difference in ratings from special and other librarians (Table 9). Special librarians were less likely than other librarians to be inspired by how a career in librarianship could supply them with benefits. Eleven percent more special librarians rated this factor in the “Not at all” range

Table 9. *Cross-tabulation of “Benefits” as a Motivating Factor*

Rating		Other Librarians	Special Librarians	Total
Not at all	Count	1111 _a	178 _b	1289
	% within A9_reco	47.9%	58.9%	49.2%
A little	Count	565 _a	55 _b	620
	% within A9_reco	24.4%	18.2%	23.7%
A moderate amount	Count	477 _a	53 _a	530
	% within A9_reco	20.6%	17.5%	20.2%
A lot	Count	164 _a	16 _a	180
	% within A9_reco	7.1%	5.3%	6.9%
Total	Count	2317	302	2619
	% within A9_reco	100.0%	100.0%	100.0%

($\chi^2 = 13.308$, $df = 3$, $p = 0.004$) Each subscript letter denotes a subset of A9_reco categories whose column proportions do not differ significantly from each other at the .05 level.

Flexible career options was another motivating factor which had statistically significant differences ($p = 0.020$) between special and other librarians. Table 10 shows how more special librarians were inspired by this factor than other librarians. Other librarians rated this factor highest in the moderate range (33.7%) while the highest number of special librarians rated it in the “A lot” range (26.7%).

Table 10. *Cross-tabulation of “Flexible Career Options” as a Motivating Factor*

Rating		Other Librarians	Special Librarians	Total
Not at all	Count	553 _a	66 _a	619
	% within A9_reco	23.8%	21.8%	23.6%
A little	Count	528 _a	72 _a	600
	% within A9_reco	22.7%	23.8%	22.8%
A moderate amount	Count	784 _a	84 _b	868
	% within A9_reco	33.7%	27.7%	33.0%
A lot	Count	460 _a	81 _b	541
	% within A9_reco	19.8%	26.7%	20.6%
Total	Count	2325	303	2628
	% within A9_reco	100.0%	100.0%	100.0%

($\chi^2 = 9.792$, $df = 3$, $p = 0.020$) Each subscript letter denotes a subset of A9_reco categories whose column proportions do not differ significantly from each other at the .05 level.

The motivating factor of an “LIS career fits with my family responsibilities” was found to be statistically significant ($p = 0.000$) through chi-square testing (Table 11). The majority of special librarians (61.9%) did not view this as a factor that inspired them to enter librarianship. Although other librarians had the highest percentage of their respondents (47.4%) in the “Not at all” range, their answers were more spread out causing them to have 14.5% less in this category.

Table 11. *Cross-tabulation of “LIS Career Fits with my Family Responsibilities”*

Rating		Other Librarians	Special Librarians	Total
Not at all	Count	1101 _a	187 _b	1288
	% within A9_reco	47.4%	61.9%	49.0%
A little	Count	366 _a	43 _a	409
	% within A9_reco	15.7%	14.2%	15.6%
A moderate amount	Count	452 _a	37 _b	489
	% within A9_reco	19.4%	12.3%	18.6%
A lot	Count	405 _a	35 _b	440
	% within A9_reco	17.4%	11.6%	16.8%
Total	Count	2324	302	2626
	% within A9_reco	100.0%	100.0%	100.0%

($\chi^2 = 24.791$, $df = 3$, $p = 0.000$) Each subscript letter denotes a subset of A9_reco categories whose column proportions do not differ significantly from each other at the .05 level.

In the previously presented tables, the criterion used to separate the two areas of librarianship (special and other) was which setting the librarians wanted to work in while they were still attending library school. Despite the fact that these respondents wanted to become special librarians, they may not have actually ever worked as a special librarian. For this reason, chi-square tests were repeated on the same inspiration factors using another variable for selection. The criterion variable used for this sample selection was their current jobs at the time of the survey, which was the same variable used for the demographic tests presented above. This would allow analysis of the motivating factors that inspired current special librarians to enter into the library field even if they did not want to be a special librarians when they were in library school.

Table 12 shows how respondents currently employed as special librarians rated the motivating factors. Current special librarians were most inspired by the same motivating factors as discovered when analyzing respondents who wanted to be special librarians while in library school. The only differences are the percentages and the order of the like working with people and wanting to make a difference factors. Current special

librarians were inspired to choose librarianship as a career because it was a good fit for their interests (69.1%), they had previous experience as a library assistant (44.9%), they wanted a job where they could make a difference (27%), they liked working with people (26.1%), and work in a library offered flexible career options (23%).

Table 12. *Inspirational Factor Ratings of Current Special Librarians*

Inspiring Factor	Not at all	A little	Moderately	A lot
Guidance counselor in high school	97.9%	1.7%	0.4%	0.0%
Family member or friend worked in LIS	56.0%	12.9%	12.4%	18.7%
A friend or family recommended LIS	53.1%	16.6%	13.3%	17.0%
Always wanted to be a librarian	42.3%	27.4%	15.8%	14.5%
It seemed like a good fit for my interests	2.9%	1.6%	26.3%	69.1%
Like working with computers	45.0%	21.7%	23.3%	10.0%
Like working with people*	14.9%	20.3%	38.6%	26.1%
Wanted a job where I could make a difference*	16.2%	19.1%	37.8%	27.0%
Recruited by LIS program	92.5%	5.8%	0.8%	0.8%
Worked as an assistant in a library or information center	35.0%	7.8%	12.3%	44.9%
Volunteered in a library or information setting	67.6%	14.1%	8.7%	9.5%
Length of training	40.9%	21.5%	28.5%	9.1%
Flexible education options for working adults	51.9%	12.3%	15.6%	20.2%
Availability of jobs	21.5%	24.8%	34.7%	19.0%
Salary*	42.1%	34.7%	21.1%	2.1%
Benefits	54.1%	22.3%	19.0%	4.5%
Flexible career options	20.6%	23.5%	32.9%	23.0%
LIS career fits with my family responsibilities*	61.6%	14.9%	16.1%	7.4%

* $p < 0.05$ (Chi-square testing was used to compare these respondents against others)

Chi-square tests were also conducted to see if current special librarians had statistically significant differences between librarians employed in other more traditional library settings at the time of the survey. Tables 13 – 16 show the motivating factors that were found to contain statistically significant differences at $p < 0.05$.

Being motivated by the opportunity to work with people was a motivating factor where special librarians statistically differed significantly ($p = 0.000$) from other librarians (Table 13). Special librarians were less likely to be inspired by this factor. Six percent more special librarians rated this factor in the “Not at all” category while 15.7% more other librarians rated it in the “A lot” range.

Table 13. *Cross-tabulation of “Like Working with People”*

Rating		Other Librarians	Special Librarians	Total
Not at all	Count	112 _a	36 _b	148
	% within libtype	8.9%	14.9%	9.9%
A little	Count	168 _a	49 _b	217
	% within libtype	13.4%	20.3%	14.5%
A moderate amount	Count	450 _a	93 _a	543
	% within libtype	35.9%	38.6%	36.3%
A lot	Count	524 _a	63 _b	587
	% within libtype	41.8%	26.1%	39.3%
Total	Count	1254	241	1495
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 27.073$, $df = 3$, $p = 0.000$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

The motivating factor of wanting a job where the respondents could make a difference was found to contain significant statistical differences ($p = 0.000$) between special and other librarians (Table 14). Special librarians were less likely to be inspired to enter the library profession because they wanted to “make a difference.” Fifteen percent more librarians working in more traditional settings rated this factor as “A lot” while 7.2% more special librarians rated it in the “Not at all” range.

Table 14. *Cross-tabulation of “Wanted a Job Where I Could Make a Difference”*

Rating		Other Librarians	Special Librarians	Total
Not at all	Count	113 _a	39 _b	152
	% within libtype	9.0%	16.2%	10.2%
A little	Count	205 _a	46 _a	251
	% within libtype	16.3%	19.1%	16.8%
A moderate amount	Count	409 _a	91 _a	500
	% within libtype	32.6%	37.8%	33.4%
A lot	Count	527 _a	65 _b	592
	% within libtype	42.0%	27.0%	39.6%
Total	Count	1254	241	1495
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 24.298$, $df = 3$, $p = 0.000$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

The motivating factor of salary was found to significantly differ ($p = 0.036$) after running a chi-square test (Table 15). Although salary was not a major inspiration for either type of librarian, the rating in the “A lot” category was found to be significant with 3.6% more traditional librarians choosing this factor as an inspiration.

Table 15. *Cross-tabulation of “Salary” as a Motivating Factor*

Rating		Other Librarians	Special Librarians	Total
Not at all	Count	580 _a	102 _a	682
	% within libtype	46.2%	42.1%	45.6%
A little	Count	369 _a	84 _a	453
	% within libtype	29.4%	34.7%	30.3%
A moderate amount	Count	234 _a	51 _a	285
	% within libtype	18.6%	21.1%	19.0%
A lot	Count	72 _a	5 _b	77
	% within libtype	5.7%	2.1%	5.1%
Total	Count	1255	242	1497
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 8.570$, $df = 3$, $p = 0.036$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

Whether an LIS career fits with the respondents’ family responsibilities was another motivating factor in which the chi-square testing revealed the differences to be

statistically significant ($p = 0.000$). Table 16 shows that special librarians are less likely to be motivated by this factor than other librarians. 15.4 percent more special librarians rated this factor in the “Not at all” range while 10.8% other librarians rated it as “A lot.”

Table 16. *Cross-tabulation of “LIS Career Fits with my Family Responsibilities”*

Rating		Other Librarians	Special Librarians	Total
Not at all	Count	580 _a	149 _b	729
	% within libtype	46.2%	61.6%	48.7%
A little	Count	195 _a	36 _a	231
	% within libtype	15.5%	14.9%	15.4%
A moderate amount	Count	253 _a	39 _a	292
	% within libtype	20.1%	16.1%	19.5%
A lot	Count	228 _a	18 _b	246
	% within libtype	18.2%	7.4%	16.4%
Total	Count	1256	242	1498
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 25.807$, $df = 3$, $p = 0.000$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

When these two representations of special librarians (wanting to be a special librarian in library school and currently working as a special librarian) were compared, the two statistically significant motivating factors that were similar with both were: “like working with people” and “an LIS career fits with my family responsibilities.” In both cases, special librarians were less likely to be motivated by these factors than the other librarians.

Research Question 2 – Education

Analyses were conducted in order to obtain a broad understanding of the type of education, training, and professional development common, if any, to librarians currently working in special libraries. Statistical testing was also implemented to compare the

answers of special librarians to those working in more traditional settings and determine if the differences are significant. Variables related to education were the first analyzed.

The first educational analysis conducted was to determine the total number of degrees earned from each set of librarians. The t-test completed on these values did not result in any statistical significance ($p = 0.180$). Both special and other librarians had earned an average of 2.5 degrees. The WILIS 1 survey also asked respondents to identify the six most recent degrees they have earned. Chi-square testing revealed that special and other librarians had similar percentages of graduates and degree types for each of their six most recent degrees. There were no significant statistical differences between the two types of librarians. Table 17 shows the top three degrees from each librarian type as well as the number of graduates and corresponding percent.

Table 17. *Top Three Degrees Earned by Special and Other Librarians*

Degree Order	Other Librarians	Grad # / %	Special Librarians	Grad # / %
Recent	#1 Masters in LIS	903 / 71.8%	Masters in LIS	161 / 66.3%
	#2 Master of Science	110 / 8.7%	Master of Science	36 / 14.8%
	#3 Master of Arts	63 / 5%	Other degree	11 / 4.5%
2nd Recent	#1 Bachelor of Arts	493 / 40.2%	Bachelor of Arts	110 / 46.4%
	#2 Bachelor of Science	238 / 19.4%	Masters in LIS	33 / 13.9%
	#3 Master of Arts	156 / 12.7%	Bachelor of Science	31 / 13.1%
3rd Recent	#1 Bachelor of Arts	270 / 54%	Bachelor of Arts	59 / 59%
	#2 Bachelor of Science	81 / 16.2%	Bachelor of Science	14 / 14%
	#3 Associate Degree	52 / 10.4%	Master of Arts	9 / 9%
4th Recent	#1 Bachelor of Arts	49 / 47.1%	Bachelor of Arts	12 / 60%
	#2 Associate Degree	16 / 15.4%	Associate Degree	3 / 15%
	#3 Bachelor of Science	15 / 14.4%	Bachelor of Science	3 / 15%
5th Recent	#1 Bachelor of Arts	9 / 45%	Bachelor of Arts	2 / 100%
	#2 Associate Degree	6 / 30%	N/A	
	#3 Bachelor of Science	1 / 5%	N/A	
6th Recent	#1 Bachelor of Arts	2 / 40%	N/A	
	#2 Associate Degree	1 / 20%	N/A	
	#3 Bachelor of Science	1 / 20%	N/A	

Training and skills that are important to special librarians were the next aspects analyzed in this study. Several survey questions addressed the type of skills needed for success as a librarian as well as the training most preferred to acquire these skills. Some questions required respondents to indicate in which areas they have responsibilities at their current jobs.

Table 18 shows the totals for both special and other librarians. Both special and other librarians rated *Information Services, Education, and Research* and *Access and Collections* as the two LIS skillsets they are most responsible for on a daily basis. Additionally, *Digital Information Technology and Web Access* and *Information Technology and Consulting* were two areas that special librarians had a bit higher percentage of librarians who used these skills. Chi-square tests were conducted to compare the special librarians' responses to the other librarians in order to determine if these differences were statistically significant. The two skillsets that showed statistical significance were the two areas that both special and other librarians used the most.

Table 18. *LIS Skills Librarians Use in their Current Positions*

LIS Skillset	Other Librarians	Special Librarians
Administration	60.0%	56.4%
Access and collections*	83.1%	72.4%
Information services, education, and research*	82.5%	77.0%
Digital information technology and web access	60.1%	64.6%
Information technology and consulting	40.2%	41.2%

* $p < 0.05$ (Chi-square testing was used to compare these respondents against others)

Table 19 presents the analysis of Access and Collections ($p = 0.000$). Even though skills in Access and Collections were the second most used for special librarians, 10.7% more other librarians are responsible for this skillset. Additionally, 10.7% more special librarians stated that they do not use this skillset.

Table 19. *Cross-tabulation “Access and Collections”*

Skillset Usage		Other Librarians	Special Librarians	Total
No	Count	211 _a	67 _b	278
	% within libtype	16.9%	27.6%	18.6%
Yes	Count	1039 _a	176 _b	1215
	% within libtype	83.1%	72.4%	81.4%
Total	Count	1250	243	1493
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 15.349$, $df = 1$, $p = 0.000$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

Table 20 presents the analysis of Information Services, Education, and Research ($p = 0.042$). Even though special librarians rated these skills as the most used skillset, 5.5% more other librarians stated that they are responsible for this area of librarianship. 5.5 percent more of special librarians even stated that they do not use this skillset in their current position.

Table 20. *Cross-tabulation “Information Services, Education, and Research”*

Skillset Usage		Other Librarians	Special Librarians	Total
No	Count	219 _a	56 _b	275
	% within libtype	17.5%	23.0%	18.4%
Yes	Count	1031 _a	187 _b	1218
	% within libtype	82.5%	77.0%	81.6%
Total	Count	1250	243	1493
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 4.133$, $df = 1$, $p = 0.042$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

Staying informed of current trends was another aspect of librarianship that the WLIS survey addressed. Respondents were asked which methods they prefer to help them stay up-to-date in the library profession. Table 21 shows how they rated these methods. Learning on the job was the definite favorite among special librarians with 82.3% rating it as “Very important.” Chi-square tests were also conducted on each of

these training methods in order to determine if there were statistically significant differences between special and other librarians. These tests did not reveal any significant differences, so other librarians had similar percentages. In fact, learning on the job had the highest rating from other librarians as well with 80% rating it as “Very important.”

Table 21. *Methods Special Librarians Use to Stay Informed on Current Trends*

Training Methods	Not at all important	A little important	Somewhat important	Very important
Learning on the job	0.5%	0.5%	16.7%	82.3%
Conferences and workshops	1.4%	7.4%	34.0%	57.2%
Formal CE courses	6.0%	23.7%	41.9%	28.4%

Continuing education was the next element from Research Question 2 that was addressed. The first analysis involved calculating the total number of continuing education/professional development hours that both special and other librarians have participated in over the last 12 months. The means were compared with a t-test to determine if there were any statistically significant differences. The t-test revealed that there were not any statistical differences ($p = 0.838$) between the two settings. Librarians from the traditional settings had an average of 8.7 hours in the last year while special librarians had an average of 10 hours.

The respondents were also asked to rate factors that have motivated them to participate in continuing education or training. Table 22 shows how the special librarians rated the list of factors. According to the data, special librarians are mostly motivated to participate in professional development in order to grow professionally (82.9%) and improve their job skills (82.4%). When compared to other librarians, special librarians had a little higher percent in each of the motivating factors, except for earning college

credits and recertification. Chi-square testing was conducted to see if other librarians significantly differed from special librarians in regards to these factors. Most of the motivating factors had similar percentages with no significant differences.

Table 22. *Factors that Motivate Librarians to Participate in Continuing Education*

Motivating Factors	Other Librarians	Special Librarians
Improvement of job skills	82.1%	82.4%
College credit given	3.9%	2.3%
Recertification*	32.4%	7.7%
Personal professional growth	81.2%	82.9%
General interest	70.2%	72.5%
Networking opportunities	42.7%	49.1%
Keep abreast of changes in the field	71.8%	73.4%

* $p < 0.05$ (Chi-square testing was used to compare these respondents against others)

Recertification was the only factor that had a significant statistical difference ($p = 0.000$). With a 24.7% difference, special librarians were definitely less likely to be motivated to participate in continuing education because of recertification (Table 23).

Table 23. *Cross-tabulation of "Recertification" as a Motivating Factor*

Motivating Factor		Other Librarians	Special Librarians	Total
No	Count	769 _a	205 _b	974
	% within libtype	67.6%	92.3%	71.7%
Yes	Count	368 _a	17 _b	385
	% within libtype	32.4%	7.7%	28.3%
Total	Count	1137	222	1359
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 55.847$, $df = 1$, $p = 0.000$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

Continuing education is an important aspect of librarianship that librarians in both settings value. When respondents were asked if they have sufficient education, training, and experience to allow them to perform their jobs effectively, librarians in both settings

answered in the affirmative with the majority rating it in the “Agree” category. The majority of librarians also upheld with a rating of “Agree” that the organization for which they work provides sufficient opportunities for them to participate in professional development. Chi-square testing showed that there were not any significant statistical differences between the librarians’ ratings. Table 24 illustrates how the special librarians answered these two questions.

Table 24. *Continuing Education Ratings by Special Librarians*

Continuing Education	Strongly disagree	Disagree	Agree	Strongly agree
I currently have sufficient education, training and experience to allow me to perform my job effectively	1.4%	5.9%	63.5%	29.3%
My organization provides me with sufficient opportunities to participate in training	3.2%	14.9%	57.2%	24.8%

In the continuing education section, the WILIS 1 survey also asked questions to pinpoint the types of training the librarians preferred. In order to discover the areas in which special librarians were most interested, analyses were conducted on these variables. Table 25 demonstrates how the special librarians rated their interest in five areas of continuing education training.

Table 25. *Interest Ratings of Special Librarians on Continuing Education Areas*

Continuing Education	Not at all interested	Somewhat interested	Interested	Very interested
Technology training	3.6%	16.7%	42.3%	37.4%
Management training*	14.4%	29.7%	34.2%	21.6%
Training in finance*	30.6%	33.3%	26.1%	9.9%
Communication and marketing training*	23.4%	32.0%	29.7%	14.9%
Training developing my subject expertise	6.8%	22.5%	38.7%	32.0%

* $p < 0.05$ (Chi-square testing was used to compare these respondents against others)

Chi-square testing was conducted in order to see if there were any significant statistical differences when special librarians were compared to the others. The three

areas of management, finance, and communication/marketing exhibited significant differences. Tables 26 – 28 show the results of the chi-square tests.

Table 26 demonstrates how management training is a source of statistical differences ($p = 0.001$) between special and other librarians. Librarians in more traditional settings do not seem to be interested in management training as much as special librarians are. 7.9 percent more special librarians rated this as a training in which they are “Very Interested” in gaining experience. 10.2 percent more other librarians are not interested at all in gaining experience in this area.

Table 26. *Cross-tabulation of “Management Training”*

Rating		Other Librarians	Special Librarians	Total
Not at all interested	Count	279 _a	32 _b	311
	% within libtype	24.6%	14.4%	22.9%
Somewhat interested	Count	346 _a	66 _a	412
	% within libtype	30.5%	29.7%	30.4%
Interested	Count	355 _a	76 _a	431
	% within libtype	31.3%	34.2%	31.8%
Very interested	Count	155 _a	48 _b	203
	% within libtype	13.7%	21.6%	15.0%
Total	Count	1135	222	1357
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 16.796$, $df = 3$, $p = 0.001$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

Training in the area of finance was another variable that had statistical significance ($p = 0.000$) when evaluated using chi-square testing (Table 27). It was found that more special librarians are interested in this type of training. 8.6 percent more special librarians rated this training in the “Interested” range while 11.3% more other librarians were not interested in this training at all.

Table 27. *Cross-tabulation of “Training in Finance”*

Rating		Other Librarians	Special Librarians	Total
Not at all interested	Count	475 _a	68 _b	543
	% within libtype	41.9%	30.6%	40.0%
Somewhat interested	Count	397 _a	74 _a	471
	% within libtype	35.0%	33.3%	34.7%
Interested	Count	199 _a	58 _b	257
	% within libtype	17.5%	26.1%	19.0%
Very interested	Count	63 _a	22 _b	85
	% within libtype	5.6%	9.9%	6.3%
Total	Count	1134	222	1356
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 18.847$, $df = 3$, $p = 0.000$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

Communication and marketing training was the last area that exhibited significant statistical differences ($p = 0.012$) between the two settings of librarianship. Although this area of training was not highly rated in either library setting, 5.9% more special librarians rated this in the “Very Interested” category (Table 28).

Table 28. *Cross-tabulation of “Communication and Marketing Training”*

Rating		Other Librarians	Special Librarians	Total
Not at all interested	Count	308 _a	52 _a	360
	% within libtype	27.1%	23.4%	26.5%
Somewhat interested	Count	437 _a	71 _a	508
	% within libtype	38.5%	32.0%	37.4%
Interested	Count	288 _a	66 _a	354
	% within libtype	25.4%	29.7%	26.1%
Very interested	Count	102 _a	33 _b	135
	% within libtype	9.0%	14.9%	9.9%
Total	Count	1135	222	1357
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 10.873$, $df = 3$, $p = 0.012$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

Research Question 3 – Career History

Discovering the professional career path special librarians have taken is key in developing a deeper understanding of who special librarians are. Analyzing the past and current career choices that special librarians have made will reveal a great deal about the special library profession. Comparing the career histories and trajectories of these special librarians with more traditional librarians will help determine if there are any meaningful differences or underlying commonalities between the two settings.

Initial analysis involved isolating the special librarians from the other more traditional librarians by using the variable of what type of librarian the respondents wanted to be while they were attending library school as the criterion for the sample selection. In the WILIS 1 survey, respondents were asked details about the progression of three jobs: their job before library school, their job after library school, and their current job. Tables 29 – 34 show the relationship between the area of librarianship the respondents wanted to work in while in library school and each of these jobs. The categories of the criterion variable (other vs. special) will remain the same as previous analyses.

Tables 29 and 30 both focus on the jobs in which respondents worked before they entered library school. Table 29 presents how the respondents answered this question by breaking the positions down into categories of library and non-library as well as whether they used library and information science skills. Although percentages were very similar in each category, a significant statistical difference ($p = 0.039$) was found in the area of self-employment with 2% more prospective special librarian selecting this job type as a

representative of their job before library school. According to their responses, most respondents were working in a non-library setting before they entered library school.

Table 29. *Cross-tabulation of Job Type Before Library School*

Job Type		Other Librarians	Special Librarians	Total
In a library or information center using LIS skills/knowledge	Count	486 _a	74 _a	560
	% within A9_reco	30.3%	33.5%	30.7%
In a library or information center not using LIS skills/knowledge	Count	140 _a	14 _a	154
	% within A9_reco	8.7%	6.3%	8.4%
In a non-library/information center setting using LIS skills	Count	184 _a	19 _a	203
	% within A9_reco	11.5%	8.6%	11.1%
In a non-library/information center setting not using LIS skills	Count	629 _a	95 _a	724
	% within A9_reco	39.3%	43.0%	39.7%
Self-employed	Count	20 _a	7 _b	27
	% within A9_reco	1.2%	3.2%	1.5%
Other, please specify	Count	143 _a	12 _a	155
	% within A9_reco	8.9%	5.4%	8.5%
Total	Count	1602	221	1823
	% within A9_reco	100.0%	100.0%	100.0%

($\chi^2 = 11.709$, $df = 5$, $p = 0.039$) Each subscript letter denotes a subset of A9_reco categories whose column proportions do not differ significantly from each other at .05.

Further analysis was conducted on the respondents who answered that they had worked in a library setting before library school. In order to determine if there were any statistically significant relationships between the areas of librarianship they had worked and what they wanted to be in library school, chi-square testing was conducted. Table 30 shows that there were significant statistical differences ($p = 0.000$) between the two types of librarians. Respondents who wanted to work in more traditional library settings were

more likely to have already worked in that type of setting (school, public, and academic). Special librarians were more likely to have already worked in special and “other” nontraditional library settings. In fact, almost half of the prospective special librarians had worked in a special library, which was 40.4% more than the other librarians. Most of the other librarians had worked in an academic library, which was 14% more than the special librarians.

Table 30. *Cross-tabulation of Library Type for Job Before LIS School*

Library Type		Other Librarians	Special Librarians	Total
School	Count	113 _a	6 _b	119
	% within A9_reco	18.0%	6.7%	16.6%
Public	Count	187 _a	9 _b	196
	% within A9_reco	29.8%	10.1%	27.4%
Academic	Count	264 _a	25 _b	289
	% within A9_reco	42.1%	28.1%	40.4%
Consortium	Count	2 _a	0 _a	2
	% within A9_reco	0.3%	0.0%	0.3%
Special	Count	36 _a	41 _b	77
	% within A9_reco	5.7%	46.1%	10.8%
Other	Count	25 _a	8 _b	33
	% within A9_reco	4.0%	9.0%	4.6%
Total	Count	627	89	716
	% within A9_reco	100.0%	100.0%	100.0%

($\chi^2 = 143.188$, $df = 5$, $p = 0.000$) Each subscript letter denotes a subset of A9_reco categories whose column proportions do not differ significantly from each other at .05.

Tables 31 and 32 both focus on the jobs in which respondents worked directly after they graduated from library school. Similar to the last section, Table 31 presents how the respondents answered this question by breaking the positions down into categories of library and non-library as well as whether they used LIS skills. Chi-square testing did not reveal any significant statistical differences ($p = 0.086$). More than 80% of respondents from each setting worked in a library or information center after they

graduated from library school: 85.2% other and 89.6% special. Although 4.4% more special librarians worked in a library setting using LIS skills than other librarians, this difference was not statistically significant.

Table 31. *Analysis of Respondents' Job After Library School*

Job Type		Other Librarians	Special Librarians
In a library or information center using LIS skills/knowledge	Count	1033	188
	Percent	84.0%	89.1%
In a library or information center not using LIS skills/knowledge	Count	15	1
	Percent	1.2%	0.5%
In a non-library or non-information center setting using LIS skills	Count	101	10
	Percent	8.2%	4.7%
In a non-library or non-information center setting not using LIS skills	Count	53	8
	Percent	4.3%	3.8%
Self-employed	Count	2	2
	Percent	0.2%	0.9%
Other, please specify	Count	26	2
	Percent	2.1%	0.9%
Total	Count	1230	211
	Percent	100.0%	100.0%

Further analysis was conducted to determine if there were any significant statistical differences among the respondents who answered that they had worked in a library or information setting after LIS school. Chi-square testing revealed that there were significant statistical differences ($p = 0.000$) between the employment of respondents who had hoped to work in special libraries vs. those who wanted a more traditional library setting (Table 32). More than half (54%) of respondents who wanted to become special librarian actually became special librarians after graduating library school. The prospective special librarians were less likely to work in school libraries while prospective other librarians were less likely to work in special libraries. The highest percentage for prospective other librarians was academic (36.1%) followed by

public (29.2%). Academic settings seemed to be the next popular library type for those who had hoped to become special librarians (only 9.1% less than other librarians).

Table 32. *Cross-tabulation of Library Type for Job After LIS School*

Library Type		Other Librarians	Special Librarians	Total
School	Count	188 _a	8 _b	196
	% within A9_reco	18.0%	4.2%	15.9%
Public	Count	305 _a	21 _b	326
	% within A9_reco	29.2%	11.1%	26.4%
Academic	Count	378 _a	51 _b	429
	% within A9_reco	36.1%	27.0%	34.7%
Consortium	Count	1 _a	0 _a	1
	% within A9_reco	0.1%	0.0%	0.1%
Special	Count	145 _a	102 _b	247
	% within A9_reco	13.9%	54.0%	20.0%
Other	Count	29 _a	7 _a	36
	% within A9_reco	2.8%	3.7%	2.9%
Total	Count	1046	189	1235
	% within A9_reco	100.0%	100.0%	100.0%

($\chi^2 = 172.053$, $df = 5$, $p = 0.000$) Each subscript letter denotes a subset of A9_reco categories whose column proportions do not differ significantly from each other at .05.

Tables 33 and 34 both focus on the third category of employment the WILIS 1 survey addressed—respondents' current position. Chi-square testing was conducted in order to determine if the library setting where the respondents wanted to work while in library school had any significant relationship with their current position of employment at the time of the survey. No statistical significance ($p = 0.712$) was found in this analysis. Approximately 80% of respondents from each setting were employed in libraries or information centers (Table 33). The rest of the categories also had similar percentages between both special and other librarians.

Table 33. *Analysis of Respondents' Current Job*

Job Type		Other Librarians	Special Librarians
In a library or information center using LIS skills/knowledge	Count	1330	175
	Percent	75.7%	74.5%
In a library or information center not using LIS skills/knowledge	Count	4	1
	Percent	0.2%	0.4%
In a non-library or non-information center setting using LIS skills	Count	211	25
	Percent	12.0%	10.6%
In a non-library or non-information center setting not using LIS skills	Count	97	18
	Percent	5.5%	7.7%
Self-employed	Count	61	10
	Percent	3.5%	4.3%
Other, please specify	Count	55	6
	Percent	3.1%	2.6%
Total	Count	1758	235
	Percent	100.0%	100.0%

Table 34 presents further analysis of the respondents who stated that they were working in a library or information center at the time of the survey. The chi-square testing that was conducted revealed that there were significant statistical differences ($p = 0.000$) between the two types of librarians. Nearly half (49.4%) of the respondents who had wanted to be special librarians while they were in library school were working in special libraries. Academic libraries were the second highest percentage for both types of librarians. Despite being one of the lower settings in a previous analysis, school libraries actually had the highest percentage of other librarians. In their current positions, special librarians were more spread out over the settings than in previous analyses.

Table 34. *Cross-tabulation of Library Type for Current Job*

Library Type		Other Librarians	Special Librarians	Total
School	Count	476 _a	18 _b	494
	% within A9_reco	35.9%	10.2%	32.9%
Public	Count	277 _a	27 _a	304
	% within A9_reco	20.9%	15.3%	20.3%
Academic	Count	416 _a	44 _a	460
	% within A9_reco	31.4%	25.0%	30.6%
Special	Count	156 _a	87 _b	243
	% within A9_reco	11.8%	49.4%	16.2%
Total	Count	1325	176	1501
	% within A9_reco	100.0%	100.0%	100.0%

($\chi^2 = 171.717$, $df = 3$, $p = 0.000$) Each subscript letter denotes a subset of A9_reco categories whose column proportions do not differ significantly from each other at .05.

The second set of analyses involved evaluating the three types of jobs (before/after LIS school and current) using the criterion variable of respondents' current job type. Tables 35 – 38 present the results from the chi-square tests conducted to reveal if there is a relationship between the area of librarianship where respondents currently work and two of the job categories—job before and job after. Respondents' current job was not tested using separate analyses because this variable was already used for the criterion to create the sample selection. The first analysis in this set was on the job type in which respondents worked before they entered library school (Tables 35 and 36). Chi-square testing resulted in finding no significant statistical differences ($p = 0.193$) between the answers of respondents who were employed as special librarians and those who worked in more traditional settings. Like the initial testing, most of the librarians worked in a non-library position before they started library school (Table 35). Both special and other librarians had similar percentages in each job type category.

Table 35. *Analysis of Job Before LIS School by Current Librarian Type*

Job Type		Other Librarians	Special Librarians
In a library or information center using LIS skills/knowledge	Count	304	70
	Percent	32.2%	37.4%
In a library or information center not using LIS skills/knowledge	Count	90	12
	Percent	9.5%	6.4%
In a non-library or non-information center setting using LIS skills	Count	84	18
	Percent	8.9%	9.6%
In a non-library or non-information center setting not using LIS skills	Count	380	76
	Percent	40.2%	40.6%
Self-employed	Count	8	3
	Percent	0.8%	1.6%
Other, please specify	Count	79	8
	Percent	8.4%	4.3%
Total	Count	945	187
	Percent	100.0%	100.0%

Further analyses was conducted on the respondents who answered that they worked as librarians before library school. In order to determine if the job type respondents were working in before library school had any statistical relationship with the type of library in which they are currently working, chi-square testing was completed. Table 36 shows that there were significant statistical differences at $p = 0.000$. Special librarians were almost evenly split between working in special (35.4%) and academic (31.7%) libraries before LIS school. Special librarians were least likely to work at a school library. The two highest percentages for other librarians were academic (42.1%) and public (32.5%). 28.8 percent more special librarians than other librarians had worked in special libraries before they started library school.

Table 36. *Cross-tabulation of Job Before LIS School by Current Librarian Type*

Library Type		Other Librarians	Special Librarians	Total
School	Count	61 _a	4 _b	65
	% within libtype	15.5%	4.9%	13.7%
Public	Count	128 _a	16 _b	144
	% within libtype	32.5%	19.5%	30.3%
Academic	Count	166 _a	26 _a	192
	% within libtype	42.1%	31.7%	40.3%
Consortium	Count	1 _a	0 _a	1
	% within libtype	0.3%	0.0%	0.2%
Special	Count	26 _a	29 _b	55
	% within libtype	6.6%	35.4%	11.6%
Other	Count	12 _a	7 _b	19
	% within libtype	3.0%	8.5%	4.0%
Total	Count	394	82	476
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 65.141$, $df = 5$, $p = 0.000$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

The next set of analyses (Tables 37 and 38) evaluated the respondents' job after library school and their current job to determine if there were any significant statistical differences. Table 37 shows that there were not any significant statistical differences between the two types of librarians ($p = 0.569$) as each had similar percentages in every category. More than 90% of librarians had worked in a library or information center after they completed library school. In fact, 3.3% more special librarians had actually worked in a library setting than other librarians.

Table 37. *Analysis of Job After LIS School by Current Librarian Type*

Job Type		Other Librarians	Special Librarians
In a library or information center using LIS skills/knowledge	Count	572	154
	% within libtype	88.7%	92.2%
In a library or information center not using LIS skills/knowledge	Count	9	2
	% within libtype	1.4%	1.2%
In a non-library or non-information center setting using LIS skills	Count	26	2
	% within libtype	4.0%	1.2%
In a non-library or non-information center setting not using skills	Count	27	7
	% within libtype	4.2%	4.2%
Self-employed	Count	2	0
	% within libtype	0.3%	0.0%
Other, please specify	Count	9	2
	% within libtype	1.4%	1.2%
Total	Count	645	167
	% within libtype	100.0%	100.0%

To study the librarians, respondents who answered that they had worked in a library or information center after library school was further analyzed through another chi-square test. This test resulted in showing that there were significant statistical differences ($p = 0.000$) between the two librarian types and the library setting they worked in after library school. Table 38 shows that 50% of current special librarians worked in a special library after graduating from library school. Similarly to the other analyses conducted with a different criterion variable, the academic setting had the next highest percentage for special librarians. Public and academic libraries also had the two highest percentages for other librarians. 37.2 percent more current special librarians had worked in special libraries after library school than other librarians.

Table 38. *Cross-tabulation of Library Type for Job After LIS School by Current Librarian Type*

Library Type		Other Librarians	Special Librarians	Total
School	Count	74 _a	8 _b	82
	% within libtype	12.8%	5.1%	11.1%
Public	Count	188 _a	22 _b	210
	% within libtype	32.4%	14.1%	28.5%
Academic	Count	237 _a	43 _b	280
	% within libtype	40.9%	27.6%	38.0%
Special	Count	74 _a	78 _b	152
	% within libtype	12.8%	50.0%	20.7%
Other	Count	7 _a	5 _a	12
	% within libtype	1.2%	3.2%	1.6%
Total	Count	580	156	736
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 112.154$, $df = 4$, $p = 0.000$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

Another element used to discover more about the professional history of special librarians was their career trajectory or the path created by changing jobs either in the same or different organizations. In addition to asking about some specific jobs, like the job before and after library school, the WILIS 1 survey also addressed the career moves that have created the progression of their professional trajectories. For example, one question asked respondents to describe their total job history from their first job until the time of the survey. A chi-square test was run on this variable to determine if there were any significant statistical differences between the answers of the current special and other librarians. The sample selection used for the tests in this section were the respondents' current job. This test resulted in no significant statistical differences ($p = 0.079$) between the two librarian types. Most librarians either had "two or more jobs, moving up" or "two or more jobs, moving both laterally and up." Earlier in the survey, respondents were also asked a similar question, except that it was focused on their current employer.

Analysis of this variable actually resulted in significant statistical differences ($p = 0.000$) between the two librarian types. Table 39 shows the results.

Table 39. *Cross-tabulation of Career Trajectory for Special and Other Librarians*

Career Trajectory		Other Librarians	Special Librarians	Total
Two or more positions, moving up the organization	Count	177 _a	48 _b	225
	% within libtype	40.4%	55.8%	42.9%
Two or more positions moving both up and across the organization	Count	108 _a	32 _b	140
	% within libtype	24.7%	37.2%	26.7%
Two or more positions, moving across the organization	Count	125 _a	4 _b	129
	% within libtype	28.5%	4.7%	24.6%
Two or more positions moving down and across the organization	Count	5 _a	0 _a	5
	% within libtype	1.1%	0.0%	1.0%
Two or more positions moving down the organization	Count	4 _a	0 _a	4
	% within libtype	0.9%	0.0%	0.8%
Three or more positions moving both up and down	Count	19 _a	2 _a	21
	% within libtype	4.3%	2.3%	4.0%
Total	Count	438	86	524
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 27.366$, $df = 5$, $p = 0.000$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

Results of the chi-square testing showed that special librarians were more likely to move up in an organization than other librarians. 15.8 percent more special librarians stated that they have had two or more positions in their current workplace while moving up in rank. Additionally, 12.5% more special librarians also stated that they have had two or more positions moving both up and across their current organization. The highest percentage of other librarians did fall into the category of having two or more positions

while moving up in the organization, but the trajectory of only moving across the organization and not up was the second highest ranked answer. Another question in the survey connected to this one asked respondents how many jobs they have had with their current employer. The t-test completed on this variable to measure the means did not result in any statistical significance ($p = 0.874$). Both special and other librarians had an average of 1.7 jobs within their current employing organization.

In order to learn gain a better understanding of the positions available in special librarianship, the two variables of *Longest Job* and *Highest-Achieving Job* were analyzed. Out of their entire career history, librarians were asked to identify their longest and highest-achieving jobs. Frequency analyses were run to simply see which position in special librarianship met these two qualifications. Table 40 displays the longest special library jobs while table 41 shows the results for the highest-achieving.

Table 40. *Frequency of Longest Special Library Jobs*

Special Library Setting	Frequency	Percent
Health/medical library	14	22.6%
Law library	6	9.7%
Corporate library	15	24.2%
Federal, state or local government library	20	32.3%
Other special library	7	11.3%
Total	62	100.0%

Table 41. *Frequency of Highest-Achieving Special Library Jobs*

Special Library Setting	Frequency	Percent
Health/medical library	7	23.3%
Law library	5	16.7%
Corporate library	7	23.3%
Federal, state or local government library	9	30.0%
Other special library	2	6.7%
Total	30	100.0%

In both analyses (longest and highest-achieving), the setting of “federal, state or local government library” was the most ranked position. Corporate and Health/Medical libraries were the second and third most chosen job positions for both the longest and highest-achieving jobs.

Research Question 4 – Job Satisfaction

Job satisfaction is a key element that can be used for retaining existing employees and recruiting new ones. Analyses conducted on the job satisfaction of current special librarians form an overall picture of the special library profession and pinpoint if special librarians are satisfied with their chosen career. Comparing the levels of job satisfaction of librarians who are currently employed in special libraries and those who work in more traditional settings will reveal if there are any significant statistical differences between the two. The WILIS 1 survey had a whole section that addressed job satisfaction.

The data analysis to answer Question 4 began with an investigation of what job characteristics special librarians valued. This was completed in order to determine what “job satisfaction” means to the surveyed librarians. Chi-square testing was also completed in order to discover if there were any differences or similarities in the levels of job satisfaction between special and other librarians. The sample selection was created using the criterion variable of the librarians’ current jobs. Table 42 presents how the special librarians rated the job characteristics addressed in the questions.

Table 42. *Value Ratings of Special Librarians on Job Characteristics*

Job Characteristics	Not at all important	A little important	Somewhat important	Very important
Good opportunities for advancement*	2.3%	10.4%	41.4%	45.9%
Enough support and equipment to get the job done	0.0%	0.5%	16.7%	82.9%
A lot of leisure time (e.g. time for hobbies, etc.)*	9.0%	25.7%	45.5%	19.8%
Good pay	0.0%	1.4%	44.1%	54.5%
Freedom to decide how you do your own work	0.0%	2.7%	39.6%	57.7%
Good job security*	0.0%	5.4%	34.2%	60.4%
Job responsibilities that are clearly defined	2.3%	9.9%	43.7%	44.1%
Good fringe benefits	0.0%	9.5%	51.4%	39.2%
The job is interesting	0.0%	0.9%	18.0%	81.1%
Leadership opportunities	4.5%	18.0%	45.9%	31.5%
An occupation that is recognized and respected	3.2%	7.7%	50.2%	38.9%
You have enough time to get the job done	0.9%	6.8%	55.7%	36.7%
A job that allows one to work independently	0.5%	8.6%	48.0%	43.0%
A lot of contact with other people*	7.2%	26.2%	46.6%	19.9%
An occupation in which one can help others*	2.7%	11.3%	41.9%	44.1%
Gives a feeling of doing something meaningful*	0.0%	6.3%	31.5%	62.2%
Your supervisors value your opinion	0.0%	5.0%	36.5%	58.6%
A job that is useful to society*	1.4%	9.9%	40.5%	48.2%
Ability to balance work and family responsibilities*	1.8%	5.4%	36.0%	56.8%

* $p < 0.05$ (Chi-square testing was used to compare these respondents against others)

According to their answers, special librarians valued having enough support/equipment to get the job done and having a job that is interesting. Least valued job characteristics for special librarians were having a lot of contact with other people and having a job that provides a lot of leisure time for things like hobbies. Tables 43 – 50 present the job characteristics that testing resulted in significant statistical differences.

The results for the chi-square test on the job characteristic of having opportunities for advancement are displayed in Table 43. Special librarians are statistically more likely ($p = 0.000$) to value this characteristic than other librarians. In fact, 14.7% more special librarians rated this as “Very important” while 3.5% more other librarians stated that it was not important at all and 7.4% more rated it in the “A little important” range.

Table 43. *Cross-tabulation of “Good Opportunities for Advancement”*

Rating		Other Librarians	Special Librarians	Total
Not at all important	Count	66 _a	5 _b	71
	% within libtype	5.8%	2.3%	5.2%
A little important	Count	203 _a	23 _b	226
	% within libtype	17.8%	10.4%	16.6%
Somewhat important	Count	515 _a	92 _a	607
	% within libtype	45.2%	41.4%	44.6%
Very important	Count	355 _a	102 _b	457
	% within libtype	31.2%	45.9%	33.6%
Total	Count	1139	222	1361
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 23.376$, $df = 3$, $p = 0.000$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

A job that allows workers to have enough time for leisure activities, like hobbies, was another characteristic that librarian respondents rated. Chi-square testing resulted in significant statistical differences at $p = 0.049$ (Table 44). Special librarians were more likely to value this factor of job satisfaction with 5.8% more rating it as very important. The range of “A little important” had a statistical difference as 7.2% more other librarians rated the factor of having leisure time in this category.

Table 44. *Cross-tabulation of “A Lot of Leisure Time (e.g. Time for Hobbies)”*

Rating		Other Librarians	Special Librarians	Total
Not at all important	Count	84 _a	20 _a	104
	% within libtype	7.4%	9.0%	7.6%
A little important	Count	375 _a	57 _b	432
	% within libtype	32.9%	25.7%	31.7%
Somewhat important	Count	520 _a	101 _a	621
	% within libtype	45.7%	45.5%	45.6%
Very important	Count	160 _a	44 _b	204
	% within libtype	14.0%	19.8%	15.0%
Total	Count	1139	222	1361
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 7.855$, $df = 3$, $p = 0.049$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

Job security was another characteristic that librarians rated in the WILIS 1 study.

Statistical significance ($p = 0.020$) was found when chi-square tests were conducted

(Table 45). Although most librarians from both settings valued this element of job satisfaction, 9.2% more other librarians rated this as very important. For this reason, other librarians were more likely to value job security. 7.2 percent more special librarians rated it in the “Somewhat important” range.

Table 45. *Cross-tabulation of “Good Job Security”*

Rating		Other Librarians	Special Librarians	Total
Not at all important	Count	4 _a	0 _a	4
	% within libtype	0.4%	0.0%	0.3%
A little important	Count	34 _a	12 _a	46
	% within libtype	3.0%	5.4%	3.4%
Somewhat important	Count	308 _a	76 _b	384
	% within libtype	27.0%	34.2%	28.2%
Very important	Count	794 _a	134 _b	928
	% within libtype	69.6%	60.4%	68.1%
Total	Count	1140	222	1362
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 9.794$, $df = 3$, $p = 0.020$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

Table 46 presents the results from the chi-square test on how librarians rated the job characteristic of having contact with other people at work. Statistical significance ($p = 0.041$) was found in the tendency for more special librarians to rate this lower than other librarians. 8.3 percent less special librarians placed this factor in the “Very important” range than other librarians.

Table 46. *Cross-tabulation of “A Lot of Contact with Other People”*

Rating		Other Librarians	Special Librarians	Total
Not at all important	Count	59 _a	16 _a	75
	% within libtype	5.2%	7.2%	5.5%
A little important	Count	243 _a	58 _a	301
	% within libtype	21.4%	26.2%	22.1%
Somewhat important	Count	515 _a	103 _a	618
	% within libtype	45.3%	46.6%	45.5%
Very important	Count	321 _a	44 _b	365
	% within libtype	28.2%	19.9%	26.9%
Total	Count	1138	221	1359
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 8.234$, $df = 3$, $p = 0.041$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

The opportunity to help others was another job characteristic rated by the survey respondents. Chi-square testing resulted in significant statistical differences ($p = 0.000$) between special librarians and those who work in more traditional settings. Special librarians were definitely less likely to rate this as a very important job characteristic because 16.7% more other librarians rated it in this category. 9.2 percent more special librarians rated this factor as a somewhat important job characteristic.

Table 47. *Cross-tabulation of “An Occupation in Which One Can Help Others”*

Rating		Other Librarians	Special Librarians	Total
Not at all important	Count	13 _a	6 _a	19
	% within libtype	1.1%	2.7%	1.4%
A little important	Count	62 _a	25 _b	87
	% within libtype	5.4%	11.3%	6.4%
Somewhat important	Count	372 _a	93 _b	465
	% within libtype	32.7%	41.9%	34.2%
Very important	Count	692 _a	98 _b	790
	% within libtype	60.8%	44.1%	58.0%
Total	Count	1139	222	1361
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 26.548$, $df = 3$, $p = 0.000$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

Statistical testing of how librarians rated the characteristic of their job causing them to feel like they are doing something meaningful resulted in significant differences ($p = 0.000$) between special and other librarians (Table 48). Other librarians were more likely to rate this characteristic as an important factor of job satisfaction. 9.7 percent more other librarians rated this as very important while 4.3% more special librarians rated it as only a little important.

Table 48. *Cross-tabulation of “Gives a Feeling of Doing Something Meaningful”*

Rating		Other Librarians	Special Librarians	Total
Not at all important	Count	7 _a	0 _a	7
	% within libtype	0.6%	0.0%	0.5%
A little important	Count	23 _a	14 _b	37
	% within libtype	2.0%	6.3%	2.7%
Somewhat important	Count	290 _a	70 _a	360
	% within libtype	25.5%	31.5%	26.5%
Very important	Count	819 _a	138 _b	957
	% within libtype	71.9%	62.2%	70.3%
Total	Count	1139	222	1361
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 19.021$, $df = 3$, $p = 0.000$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at .05.

Having a job that is useful to society was another characteristic that was rated by both sets of librarians. Table 49 reveals how results from chi-square testing showed that a significant statistical difference ($p = 0.004$) exists between special and other librarians. Special librarians were least likely to value this element of job satisfaction because 12.1% less rated this as very important. 7.3 percent more special librarians rated this in the “Somewhat important” range.

Table 49. *Cross-tabulation of “A Job that is Useful to Society”*

Rating		Other Librarians	Special Librarians	Total
Not at all important	Count	7 _a	3 _a	10
	% within libtype	0.6%	1.4%	0.7%
A little important	Count	67 _a	22 _b	89
	% within libtype	5.9%	9.9%	6.5%
Somewhat important	Count	378 _a	90 _b	468
	% within libtype	33.2%	40.5%	34.4%
Very important	Count	687 _a	107 _b	794
	% within libtype	60.3%	48.2%	58.3%
Total	Count	1139	222	1361
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 13.579$, $df = 3$, $p = 0.004$) Each subscript letter denotes a subset of Type of Librarian categories whose column proportions do not differ significantly from each other at .05.

The ability to balance work and family responsibilities was the last job characteristic that resulted in significant statistical differences ($p = 0.012$). Table 50 reveals that special librarians are less likely to value this as a very important job characteristic. 9.7 percent more other librarians valued this characteristic as very important while 10.7% more special librarians answered that it was only somewhat important.

Table 50. *Cross-tabulation of “Ability to Balance Work and Family Responsibilities”*

Rating		Other Librarians	Special Librarians	Total
Not at all important	Count	21 _a	4 _a	25
	% within libtype	1.8%	1.8%	1.8%
A little important	Count	72 _a	12 _a	84
	% within libtype	6.3%	5.4%	6.2%
Somewhat important	Count	288 _a	80 _b	368
	% within libtype	25.3%	36.0%	27.0%
Very important	Count	758 _a	126 _b	884
	% within libtype	66.5%	56.8%	65.0%
Total	Count	1139	222	1361
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 10.939$, $df = 3$, $p = 0.012$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

Questions in the WILIS 1 survey addressed if respondents agreed or disagreed with certain components that make up how they feel about their current position. Table 51 shows the special librarians’ responses. When asked if they had the chance to do it all over again, would they have chosen to work in the same position, 47.7% of special librarians chose “Strongly agree.” Most special librarians agree that they are happy with their current work environment (56.5% agree and 30.5% strongly agree). Statistical testing revealed that both special and other librarians had similar rating levels with these components of job satisfaction, except for the factor that daily choices they make on the job require little thought ($p = 0.021$).

Table 51. *Analysis of Job Satisfaction Components Special Librarians Value*

Components of Job Satisfaction	Strongly disagree	Disagree	Agree	Strongly agree
The daily choices I make on my job require little thought*	29.8%	53.8%	14.3%	2.1%
There is not enough time to get required work done	5.0%	43.5%	38.1%	13.4%
I am generally happy with my current work environment	4.2%	8.8%	56.5%	30.5%
I still like my job	2.1%	7.5%	54.8%	35.6%
Knowing what I know now, if I had to decide all over again, I would still decide to take my job	6.7%	5.9%	39.7%	47.7%

* $p < 0.05$ (Chi-square testing was used to compare these respondents against others)

Table 52 shows the statistical differences of the librarians' ratings of how the daily choices they make on their job require little thought. Most librarians from both settings disagreed with this statement. However, the rating of "Disagree" resulted in a difference of 8.5% with less special librarians choosing this category. 3.1 percent more special librarians did rate this in the "Strongly disagree" range when compared to the others.

Table 52. *Cross-tabulation of "The Daily Choices I Make on My Job Require Little Thought"*

Rating		Other Librarians	Special Librarians	Total
Strongly disagree	Count	320 _a	71 _a	391
	% within libtype	26.7%	29.8%	27.2%
Disagree	Count	746 _a	128 _b	874
	% within libtype	62.3%	53.8%	60.9%
Agree	Count	123 _a	34 _a	157
	% within libtype	10.3%	14.3%	10.9%
Strongly agree	Count	9 _a	5 _a	14
	% within libtype	0.8%	2.1%	1.0%
Total	Count	1198	238	1436
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 9.703$, $df = 3$, $p = 0.021$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

Analyses were conducted on the variables of how librarians from both settings viewed their current positions. Table 53 presents how special librarians answered these questions. The majority of special librarians (74.1%) viewed their current position as a career instead of just a job or a way to have something to do. Both special and other librarians had similar percentages and mostly no significant statistical differences, except for the view that their current position is a way to get benefits.

Table 53. *Analysis of How Special Librarians View their Current Position*

View of current position	Not at all	A little	Somewhat	To a great extent
Part of a career	2.1%	5.9%	18.0%	74.1%
A way to have something to do	45.2%	18.0%	23.8%	13.0%
A way to make money	3.8%	13.8%	31.4%	51.0%
A way to get benefits*	5.9%	14.6%	33.5%	46.0%

* $p < 0.05$ (Chi-square testing was used to compare these respondents against others)

Viewing their career as a way to get benefits was the only area that showed a statistically significant difference ($p = 0.014$). Special librarians were more likely to view their job as a way to get benefits as 6% more of them valued it to a great extent while 7.4% more other librarians did not value it at all. Table 54 shows this difference.

Table 54. *Cross-tabulation of "A Way to Get Benefits"*

Rating		Other Librarians	Special Librarians	Total
Not at all	Count	159 _a	14 _b	173
	% within libtype	13.3%	5.9%	12.1%
A little	Count	156 _a	35 _a	191
	% within libtype	13.1%	14.6%	13.3%
Somewhat	Count	376 _a	80 _a	456
	% within libtype	31.5%	33.5%	31.9%
To a great extent	Count	501 _a	110 _a	611
	% within libtype	42.0%	46.0%	42.7%
Total	Count	1192	239	1431
	% within libtype	100.0%	100.0%	100.0%

($\chi^2 = 10.555$, $df = 3$, $p = 0.014$) Each subscript letter denotes a subset of libtype categories whose column proportions do not differ significantly from each other at the .05 level.

One question in the WILIS 1 survey asked respondents to rate this statement, “Overall, I am satisfied with what I do in my job.” This direct assessment of job satisfaction was evaluated using a chi-square test (Table 55). Both sets of librarians, those in special libraries and those who work in more traditional settings, are satisfied with the job they do as librarians. The majority of each type of librarian rated this in the “Agree” range. There were not any significant statistical differences between the librarians’ ratings ($p = 0.763$).

Table 55. *Analysis of Overall Job Satisfaction*

Rating		Other Librarians	Special Librarians
Strongly disagree	Count	22	6
	Percent	1.8%	2.5%
Disagree	Count	89	21
	Percent	7.4%	8.8%
Agree	Count	767	147
	Percent	64.0%	61.5%
Strongly agree	Count	320	65
	Percent	26.7%	27.2%
Total	Count	1198	239
	Percent	100.0%	100.0%

Discussion and Implications

The aim of this study was to gain insight into special librarians' motivations, education, professional histories, and satisfaction in their careers. By studying these aspects, a clearer picture of who becomes special librarians, what kind of education/training they receive, what kind of jobs they have had over time, and how satisfied they are with their chosen career of special librarianship was developed. By comparing the surveyed special librarians to the other librarians who have chosen to work in more traditional library settings, conclusions could be drawn about what, if anything, sets special librarians apart from other librarians and what the two types have in common. In this study, several analyses were conducted in order to gain a deeper understanding of what it means to be a special librarian.

Comparative Analysis

The results of the tests were closely analyzed to determine what they reveal about special librarians as well as explain any relationships found when special and other librarians were compared.

Demographics

In the demographics section of analyses, several tests were completed comparing socioeconomic factors, including age, ethnicity, annual salary, and relationship status, so an analysis of who these surveyed special librarians were could be conducted. Although the two tests conducted on age and age at graduation revealed statistically significant

differences, these differences were only of two years with each variable. Both tests showed that special librarians were younger, but, this two year age difference does not seem to be a noteworthy difference. With a closer look at the actual age of the library school graduate, instead of the differences between the two types of librarians, an average age of 32 years old does show one trend that was revealed in this study's literature review—librarianship is often a second career for many librarians (Gordon & Nesbeitt, 1999; Marshall et al., 2009b; Marshall, Rathbun-Grubb, et al., 2010; Lambert & Newman, 2012; Tewell, 2012; Slinger & Slinger, 2015; Murray, 2016). Analysis on current salary found that special librarians earn \$11,882.07 more a year than other librarians. This substantially higher salary would be very enticing for library students to know, especially since comparatively lower salaries than other professions is often a source of dissatisfaction for practicing librarians (Gordon & Nesbeitt, 1999). The quality that is unique to special librarians is the fact that they are able to combine two professional settings: the library/information center with another type of organization, like a corporate, government, or medical setting, which could explain the higher salaries they receive.

Analysis of the graduation years and number of graduates in each library type showed that there were not any significant statistical differences. Although special librarians were always outnumbered each graduation year, there were not any significant differences between the years. Special librarianship consistently has lower representation than the other more traditional types of libraries. When the demographic aspect of gender was analyzed, statistically significant differences were found. Although females had much higher percentages with both special (77%) and other (84.1%) librarians, it was

found that there are more males working in special libraries than in other more traditional libraries. This could be explained by the inclusion of public and school libraries in the “other” library category, which are usually dominated by females. Despite this, it was interesting to discover the higher percentage of males working in special libraries. This trend could be studied further and analyzed to provide an explanation. The analysis on race/ethnicity did not find any statistically significant differences between minority representation in special and other libraries. Despite the fact that there was an approximately 8% higher minority representation in special libraries, this inequality needs to be remedied. This was actually one of the purposes of the WILIS study. The team hoped to address the need for recruiting a more diverse workforce, so the librarians would actually reflect the diversity of the patrons they serve (Morgan, Farrar, & Owens, 2009).

Relationship status was another demographic that found statistically significant differences between special and other librarians. Chi-square testing revealed that special librarians were more likely to be single (never married) while other librarians were more likely to be married or living with a partner. This was a very interesting finding as this had not been addressed in the literature reviewed. In their article Morgan et al. (2009) describe the WILIS 1 survey respondents as predominately married or living with a partner (70%). By isolating the special librarians from the other librarians, this difference in relationship status was discovered.

Research Question 1

What inspired/motivated these professionals to become special librarians and how does this compare to other librarians?

Discovering what inspired special librarians to enter the field of librarianship and motivated them to want to work in special libraries could be integral in planning recruiting efforts to target prospective special librarians. Understanding the differences between what inspires special librarians and what inspires other librarians could help increase special librarian numbers. The tests involving the factors that motivated the respondents to enter librarianship were repeated twice with two different sample selections: the library type respondents wanted to work in while they were in library school and the respondents' current job. According to the literature reviewed, the most common motivating factors for pursuing librarianship as a career are: a love for reading, previous work in libraries, being influenced by a librarian/mentor, a love for research, a desire for an academic job, wanting to serve the community, a desire to help people, an interest in teaching, and the opportunity to further education (Taylor et al., 2010; Gordon & Nesbeitt, 1999; Moniarou-Papaconstantinou et al., 2015; Weihs, 1999). Analyses on the surveyed librarians revealed some of the same sources of inspiration.

Library students who wanted to be special librarians were analyzed first and ended up having more statistically significant differences with other librarians than the sample selection using current job type. Chi-square results showed that those who wanted to be special librarians were statistically less likely than other librarians to have always wanted to be librarians. Despite this difference, the majority of respondents from both settings did not seem to be inspired by this factor. This trend is contrary to a survey completed by Gordon and Nesbeitt (1999) as nearly half of the library staff members they surveyed stated that librarianship was a calling. The enjoyment of working with people often goes hand-in-hand with working in a library. However, those who wanted to be

special librarians were less likely to be inspired by the opportunity to work with people. This is also contrary to most of the literature cited in this paper, which was possibly a reflection of the larger percentage of traditional librarians impacting the results. Walker (2010), who also worked with the WILIS data, did find that librarians with science backgrounds were less inspired by the possibility of making a difference and working with people. Some of these librarians in her subsample are probably in this study's sample selection of special librarians. Additionally, Brimsek and Leach (1990) found that most SLA members assessed with the Myers-Briggs Type Indicator (MBTI) received Introversion for the first identifying letter of their personality.

Special librarians were statistically more likely to have been inspired by their previous work as an assistant in a library or information center. Although the type of library or information center was not specified, it can be assumed that it was a special library setting. This will be further explored in the career history section. Work experience in a special library directly inspired these assistants to pursue degrees in special librarianship. After working in a special library, these prospective librarians really enjoyed the work and wanted to further their career in this area. It is much easier for prospective librarians to already know what type of work goes on in an academic, public, and school library, because odds are good that they have been to one of these, however, not all library school students have been to many, if any, of the settings that comprise a special library, so choosing the special library setting is made more difficult.

Flexible education options for working adults was another area which revealed significant statistical differences between special and other librarians. Special librarians were less likely to be motivated by this factor than other librarians. This may suggest

that those who wanted to pursue a career in the more traditional library settings were inspired to pursue librarianship because it offered them a way to get their degree, possibly online, while being able to keep their jobs. Those who wanted to be special librarians perhaps had life situations that would allow them to be less focused on flexible options to obtain their degrees. Those who wanted to be special librarians were also less likely to be motivated by the benefits they would gain by entering into a career of librarianship. Although there was a significant statistical difference, both types of librarians did not seem to be inspired by this factor. Since librarianship may be a second career for these prospective librarians, perhaps they were not concerned as much about earning benefits, which might have been carried over until they started their library jobs. The fact that special librarians were not motivated by benefits is different from the findings from the study of Moniarou-Papaconstantinou and Triantafyllou (2015), because they found special librarians to value extrinsic related factors, like pay and benefits, more than traditional librarians, like public librarians.

Flexible career options was an inspirational factor that special librarians were more likely to value. This difference speaks to the uniqueness of the profession of special librarianship. Special libraries work with a variety of organizations and perform numerous duties, so career options are very flexible. Instead of being limited to a library with a normal set of tasks, the flexibility and variety in special librarianship is often what draws in prospective librarians. The factor of librarianship fitting in with the prospective librarians' family responsibilities revealed significant statistical differences with special librarians being less likely to be motivated by this factor. This was an interesting finding and further study could reveal an explanation. The fact that special librarians are more

likely to be single or never married, according to the demographic testing, could be linked to this trend. Another possible factor could be the fact that special librarians have a higher representation of males than other librarians. Traditionally, a female's profession is more likely to be impacted by family responsibilities than males, so the other librarians with a higher representation of females would be more motivated by this factor.

For the second set of analyses on these inspirational factors, the respondents' current job was used as criterion for the sample selection. This provided data on the motivations of librarians who were employed as special librarians at the time of the survey. There were two factors that both sample selections of special librarians had in common: "like working with people" and "LIS career fits with my family responsibilities." Special librarians are less likely to be motivated by the possibility of librarianship providing opportunities to work with people as well as allowing them to balance their career and family life. The percentages of special librarians responding to the factor involving family responsibilities were almost identical in the "Not at all" category (61.9% for prospective librarians and 61.6% for those who were current special librarians). There was a tiny difference of 0.8% between the two special librarian samples with those who wanted to be special librarians being inspired by this factor a fraction of a percent more. Further researching these two aspects of special librarianship would provide more understanding about special librarians and how their motivations are unique to their profession.

Wanting a job where respondents could make a difference was the first factor that had statistically significant differences between the motivations of current special and

other librarians. Special librarians were less likely than other librarians to be motivated to enter librarianship by this factor. This difference was not surprising since the results also revealed that special librarians are not inspired by working with others. This, however, is contrary to what Moniarou-Papaconstantinou and Triantafyllou (2015) found when social work values (defined as relationship with co-workers, assisting users, and contribution to society) appealed more to librarians working in public and special libraries. When a career such as librarianship is usually associated with a job of service, it was surprising and interesting to discover this about special librarians.

Another surprising finding from the analysis of the WILIS 1 data is that special librarians are statistically less likely to be motivated by salary. Although most librarians surveyed in both categories were not motivated by this factor, prior studies showed that special librarians were more likely to value the extrinsic factors of salary and job security (Moniarou-Papaconstantinou & Triantafyllou, 2015). Not to mention, special librarians earn almost \$12,000 more annually than other librarians.

One surprising result from the WILIS 1 survey data was how factors of “a family member or friend worked in LIS,” “a friend or family recommended LIS,” and “volunteered in a library or information settings” were not rated very highly from both types of librarians. The research reviewed did mention librarians being inspired by other librarians or mentors, but this must not have been the case for these librarians. Additionally, the noticeable difference between the ratings of previously working and previously volunteering in a library could be a source of further research in order to determine why this happens. Perhaps prospective librarians working in a library as assistants, have a better experience than the ones who only volunteer.

Research Question 2

What education, training, and professional development prepared these individuals for a career in special librarianship and how does this compare to other librarians?

In order to discover the education, training, and professional development that prepared special librarians for their careers, several analyses were conducted involving variables that addressed the academic degrees respondents have received, library and information skills they use in their jobs, and details about continuing education, including the number of credit hours and the respondents' motivations for obtaining their continuing education training. Statistical testing was used to analyze the six most recent academic degrees respondents received. Results showed that special and other librarians had similar education backgrounds as there were not any significant statistical differences between the number and degree types of the six most recent degrees they earned. Both types of librarians have earned an average of 2.5 degrees. It was surprising to discover that the degree types from both sets of librarians were similar. When compared to other librarians, prior research would suggest that special librarians would tend to have degrees in more areas, like art history or business, or more advanced degrees, like a JD (Juris Doctor). Another aspect to note is that special librarians did not even have enough respondents that had fifth and sixth degrees, however with the small numbers with the other librarians, this difference was not found to be statistically significant.

Results from these tests showed that librarians, in general, receive a wide range of educational training. This wide variety of degrees could also serve as proof that librarians did not pursue their Masters in LIS directly after their first undergraduate degree, especially since a Bachelors in LIS was not in the top three degrees from either

setting. This trend was also found in the study conducted by Taylor et al. (2010) as most of their survey participants decided to pursue a career in librarianship a few years after graduating from college. This further shows that librarianship is often a second career for many. One aspect of the results table displaying the top three degrees earned by each type of librarian that may show a bit of difference is the fact that although the Masters in LIS had the highest percentage for both settings in the most recent degree category, special librarians also had their LIS degree as one of the top degrees in the second most recent degree, suggesting that more special librarians received another degree after their LIS degree. This, however, was not proven to be statistically significant.

Analysis of the LIS skillsets that librarians often use in their current positions showed that *Information Services, Education, and Research* and *Access and Collections* are the two highest ranked skills for which both sets of librarians are responsible. Statistical testing on both of these areas of librarianship revealed statistically significant differences with other librarians being more likely to use these skills than special librarians. Since these skills are very traditional library and information skills, this would suggest that special librarians are more responsible for nontraditional library services that are unique to their organizations' needs. This concept is supported by both Rimland and Masuchika (2008) and Dority (2016) as they uphold that special librarians are required to not only possess LIS skills, but understand their organizations' business as well as maintain an awareness of the professional world that surrounds them, which are nontraditional skills not generally taught in library school.

Both special and other librarians highly prefer to gain their training while learning on the job. Nearly half also attend conferences and workshops to gain skills that would

help them professionally. The 1.7 hours difference special librarians had over other librarians in continuing education training was found to not be statistically significant. When their motivations for obtaining these credit hours were analyzed, the factor of recertification did reveal statistical significance between the two librarian types. Special librarians were less likely than other librarians to be motivated by participating in continuing education for the purpose of recertification. This was an interesting area to serve as a motivating factor for librarians, because librarianship currently does not require recertification to maintain LIS degrees. However, with a closer analysis of the traditional settings (academic, public, and school) represented by the “other” librarians’ group, it can be concluded that this is caused by the fact that school librarians require recertification every few years to maintain their Professional Educator’s License, which is often required to be employed by a school system.

Although most librarians agree that they have sufficient education, training, and experience to allow them to perform their jobs effectively, the majority only answered this question in the “Agree” range, which means there is still room for improvement. Some questions in the WLIS 1 study tried to pinpoint areas of librarianship in which librarians were interested in receiving continuing education training. This data could be used to help direct LIS schools in their academic program decision-making to ensure they are addressing the diverse range of skills needed by future librarians, particularly special librarians, to have success in their future careers. The areas of management, finance, and communication/marketing revealed significant statistical differences between special and other librarians. Special librarians were more likely to be interested in receiving training in this set of nontraditional skills than other librarians. This echoes the above mentioned

trend that special librarians not only need to be affluent in library skills, but also possess unique skillsets that will aid them in helping whatever type of organization they work in.

Research Question 3

What type of jobs have comprised the career histories of these special librarians and how does this compare to other librarians?

By studying the job histories of special librarians much can be learned by the path they have taken to get to where they are professionally. Knowledge gained from the analyses conducted in this study can help define any common patterns among special librarians as well as determine if there are substantial differences between special and other librarians. Like the analyses on the inspiration of librarians, this section had two sets of tests involving the previously described sample selections using the criteria of what the respondents wanted to be while in library school and their current job. Three types of jobs were tested in these career analyses: respondents' job before library school, their job after library school, and their current job. For this discussion, trends discovered between the two sample selections will be compared, because many of the tests, whether focused on the special librarians who wanted to work in special libraries while in LIS school or those who currently work in one, revealed that both sets of special librarians had similar career paths. Additionally, other aspects of respondents' job histories were explored, including their career trajectories as well as their longest and highest-achieving jobs, in this section. Testing for these final career aspects only involved the criterion of current job for the sample selection.

The first analyses involved analyzing the three focus job types (job before/after library school and current) by setting (either library or non-library) and whether they used

LIS skills or not in this position. Self-employment and “other” unique jobs were also options available for respondents to choose on the survey. The second analyses involved further analyzing those who answered that they worked in libraries or information centers by the library type they worked in. This would help determine if there were any patterns or statistically significant differences between special and other librarians.

Respondents’ jobs before library school was analyzed first. The percentages between non-library and library were close for both sets of librarians with the two different tests, however more librarians had worked in non-library jobs. This clearly represents that librarianship is often a second career for many. With both sets of tests on the job before library school, percentages between special and other librarians were very similar. One main difference between the results of the two sample sets is that respondents who wanted to be special librarians in LIS school were statistically more likely to have been self-employed when compared to other librarians. Although this was found to be a statistically significant difference, this finding does not seem noteworthy. Perhaps the uniqueness and possible business undertones of special librarianship more closely fit the interests of respondents who already had entrepreneurial backgrounds. An interesting finding was discovered when the two special librarian sample selections were compared, current special librarians had a higher percentage working in library settings using LIS skills (3.9% difference) while those who had wanted to be special librarians had a higher percentage in non-library settings using LIS skills (2.4% difference).

Further analysis of the respondents who answered that they had worked in a library setting before library school was conducted. Both sets of tests with the two sample selections found that special librarians were statistically more likely ($p = 0.000$) to

have worked in special libraries when compared to other librarians. This trend is supported by the study completed by Tewell (2012) as more than half of the surveyed art librarians had chosen to pursue art librarianship while already employed in libraries. When the two sample selections were compared, a 10.7% difference was found between the total of special librarians who had worked in special libraries. A higher percentage of those who wanted to be special librarians had worked in special libraries than those who were currently special librarians. It is interesting to note that the percentages of special librarians working in special libraries were less than 50% for both tests. As found in the literature reviewed, this suggests that librarians tend to stay in librarianship, but change roles/positions as well as library settings (Gordon & Nesbeitt, 1999). Similar to other librarians who were more likely to have worked in academic libraries, both sets of analyses showed that the second most popular library setting for special librarians was academic. The variety of libraries classed under “academic libraries” does create a similar feel to the various types of special libraries, so it is understandable that academic libraries had the second highest percentage for special librarians.

The respondents’ job after library school was the second set of analyses for each sample selection. Both sets of tests showed that the majority (more than 80%) of respondents from both library settings worked in libraries or information centers using LIS skills after they graduated from library school. This is very useful information for library schools to have as it is integral for them to track their alumni in order to remain effective in producing librarians as well as maintain the quality of their training. Although the ranges of 84%-92% are good, it would be interesting to research the reasons why 100% of respondents did not pursue librarianship after they had graduated from

library school. The WILIS 1 survey actually asked questions addressing this situation, but this was not the focus of this paper, so these variables were not analyzed. Library schools should be very interested in finding out this information.

Further analysis of the respondents who answered that they worked in a library or information center after they graduated from library school was completed with both sample selections. Tests from both sample selections showed that special librarians were statistically more likely ($p = 0.000$) to have worked in special libraries after they graduated from library school. Although other librarians were more likely to work in academic libraries, the second highest ranked setting for special librarians in both sample selections was academic. One notable difference between the results of the two sample selections of special librarians is that those who wanted to be special librarians while they were attending library school had 4% more librarians working in special libraries than those who were employed as special librarians at the time of the survey. This may suggest that these future special librarians may have geared their education and training in library school to address skills they would need to prepare for and obtain a job in special librarianship.

The job mobility available in librarianship allowing librarians to try different settings while still using some of the same basic library skills would explain why only half of the special librarians worked in special libraries. The fact that an average of 13% of other librarians from both sample selections actually worked as special librarians after they graduated from library school is also important to note. A possible explanation of why some of the other librarians realized that special librarianship would fit their career interests better than the more traditional settings was noted by White and Paris (1985) as

they found that LIS students usually do not comprehend the range of opportunities available in special librarianship until later in their training, which might be too late to change library tracks.

Analysis of the respondents' current job at the time of the survey was completed next. This section of analyses was actually only completed with one sample selection using the criterion of what type of librarian the respondents wanted to be while in library school. Analysis of respondents' current job using the selection of current special librarians was not completed since it already served as the criterion for the sample. Testing the current job type (library or non-library) resulted in finding no significant statistical differences when comparing special and other librarians. About 75% of surveyed respondents worked in a library or information center at the time of the survey. Of those who answered that they were not working in a library or information center, results show that most of these respondents were working in a non-library setting, but using LIS skills (12% other and 10.6% special). Similarly, Rathbun-Grubb (2009), also using the WILIS 1 survey data, found that 60% of the professionals who left the library field still valued the education they received from their LIS program.

Further analysis was conducted on the respondents who had answered that they were working in a library or information center at the time of the survey. Statistically significant differences were found between respondents who wanted to become special librarians and those who wanted to work in more traditional libraries. Respondents in the special library category were more likely to be working in special libraries. Additionally, special librarians were less likely to work in school libraries than other librarians. Interestingly, school librarianship became the setting with the highest number, replacing

academic as the most popular, for other librarians. As in earlier results, academic was still the second highest setting for special librarians. It should be noted that the percentage of special librarians seemed to be more spread out over the library settings than in previous tests. The career mobility available in librarianship could be an explanation for this.

The career mobility that is common in the library profession creates the trajectory of jobs that librarians have had throughout their careers. Studying the movement of librarians, particularly former, current, and future special librarians, will help determine if there are any patterns among special librarians in order to perhaps maintain high workforce numbers. Comparisons between special and other librarians, would reveal commonalities and notable differences between the two sets and further define special librarianship as a career. Research reviewed in this paper showed that librarians will often start off in a lower or less desired job in order to work their way up the career ladder to a more desired position either with their current employer or another one (Tewell, 2012; Slinger & Slinger, 2015). Analyses completed on the WILIS data involving librarians' career trajectories revealed similar results.

Chi-square testing was conducted on the variables that addressed professional trajectories using the respondents' current jobs as criterion for the sample selection. Results showed that both special and current librarians had similar movement patterns ("two or more jobs, moving up" or "two or more jobs, moving both laterally and up") through their entire career from their first job to their last/present one. This means that librarians will generally either move up the ranks in the same type of position (i.e. reference librarian, cataloger, e-resources librarian), maybe into a leadership/supervisor

role or they will move to a different type of position that will also require them to have more experience due to its higher rank.

Special and other librarians did have significant statistical differences when they were asked about their career trajectories with their current employer instead of their entire careers. Special librarians were statistically more likely than other librarians to move up in the library or information center in which they worked. Although the highest percentage for other librarians did fall into the category of having two or more positions while moving up in their organization, the trajectory of only moving across the organization and not up was their second highest ranked answer. 93 percent of special librarians had chosen one of the two categories that involved moving up (either just up or up and across) in their organization. This suggests that the special library settings not being limited to traditional libraries allows special librarians more opportunities to advance their careers and earn promotions within the organization they work.

In order to learn about the career of special librarianship and the various settings in which they work, analyses were conducted on two variables involving the longest and highest-achieving jobs the respondents have had throughout their careers. These analyses were completed only using the current special librarians as the sample. In order to find where special librarians worked the longest or had the highest-ranking position, the different special library settings were specified, including health/medical, law, corporate, and federal. For both the longest and highest-achieving jobs, the setting of “Federal, state or local government library” received the highest number of librarians. This knowledge creates an interest in conducting specific research to further explore the different special library settings and investigate their differences as well as the benefits of each one.

Research Question 4

What are the levels of job satisfaction in their current special library positions and how does this compare to other library positions?

Job satisfaction is an important element to study when trying to understand a profession. The WILIS 1 study asked questions to assess respondents' job satisfaction, overall view of their career, and the type of job characteristics they value. What employees feel about the work that they do reveals much about the profession as a whole. Discovering this information about special librarians is an important step in defining why the special library profession appeals to special librarians and can prove to be useful in recruiting efforts. Sources of dissatisfaction that were found can also be used to improve the profession in order to maintain a steady workforce. Additionally, comparing how special and other librarians value certain job characteristics can reveal similarities as well as integral differences that may explain why some respondents chose to become special librarians while others chose to work in more traditional library settings.

Analyses involving job satisfaction and its components were completed using the sample selection of the respondents' current job type. First, chi-square testing was used to compare how special and other librarians rated the importance of several job characteristics. Of the 19 job characteristics evaluated, only eight revealed significant statistical differences. This means that librarians typically value the same job characteristics, like receiving enough support and equipment to get their job done and having a job that is interesting. Where the differences exist can reveal a great deal about the two library types. Similar to what was discovered in the career trajectory section of this discussion, special librarian were statistically more likely than other librarians to

value the opportunity for career advancement. Special library settings tend to create more opportunities for librarians to advance their careers as well as receive higher salaries along with increased responsibilities.

Another job characteristic that was addressed and revealed significant statistical differences was having a lot of time for leisure activities or hobbies. This was an interesting characteristic to address as this involves whether the job requires employees to have to take their work home instead of having time for themselves to spend however they choose. Nearly half of the respondents from each librarian type rated this in the “Somewhat important” range. Although most percentages were similar, special librarians were statistically more likely than other librarians to value this characteristic. This may suggest that some positions special librarians have had in their careers required them to take work home, so this characteristic is a bit more important to them than other librarians.

Interestingly, the analysis of having good job security revealed that other librarians were more likely to value this job characteristic than special librarians. This finding was contrary to reviewed literature revealing that special librarians were more likely to value extrinsic work values, such as pay, job security, and working conditions than those in public libraries and archives (Moniarou-Papaconstantinou and Triantafyllou, 2015). This trend of special librarians not valuing extrinsic job characteristics higher than other librarians was also found in the analyses conducted in the inspiration section of this study. Benefits and salary were two other extrinsic job characteristics that did not motivate special librarians as much as those working in more traditional settings.

Four of the rated job characteristics that revealed significant statistical differences between special and other librarians involved intrinsic work values. These intrinsic job characteristics, with significant statistical differences ranging from 8.3% to 16.7%, involved having contact with a lot of people (8.3%), helping people (16.7%), having the feeling that they doing something meaningful (9.7%), and having a job that is useful to society (12.1%). Special librarians were less likely than other librarians to view these characteristics as very important. These results are similar to findings presented in the inspiration section of this paper revealing that special librarians were less likely than other librarians to have entered the library profession because they were motivated by the opportunity to make a difference and work with people. This suggests that special librarians are more likely than other librarians to value career qualities, like advancement and flexible options, over the service-oriented side of librarianship. The last job characteristic that found a statistically significant difference between the ratings of special and other librarians was the ability to balance work and family responsibilities. Similar to what was discovered in the inspiration section, special librarians were less likely to value this characteristic as important.

Analyses were also conducted on the WILIS 1 questions involving how respondents rated their agreement with certain components of job satisfaction, including being happy with their current work environment and having enough time to get their work done. Librarians from both settings had similar percentages with the value ranking of these components except in one area: their agreement as to whether the daily choices they make on their job require little thought. Although the majority of both types of librarians disagree with this statement, special librarians were less likely to disagree with

this statement than other librarians. Despite the fact that 3.1% more special librarians strongly disagreed with this job component, 5.4% more other librarians disagreed overall (including the percentages in both “Strongly disagree” and “Disagree”). This was an interesting finding and research as to the reasons for this difference would reveal important information about the daily work activities of special librarians. Differences may also be found among the various positions in special libraries. Some job tasks common in certain library positions may be more repetitive than others, requiring less thought than those that are always changing.

Respondents’ view of their current position was another component of job satisfaction that was measured by the WILIS 1 survey. Librarians were asked to rate the extent of how they viewed their current position as a part of a career, a way to have something to do, a way to make money, and a way to get benefits. The only area that showed significant statistical differences was “A way to get benefits.” Special librarians were more likely to value this to a great extent. This finding is similar to Moniarou-Papaconstantinou and Triantafyllou (2015) in how they indicated that special librarians were more satisfied with extrinsic work values. However, this finding is different from the other extrinsic job characteristics mentioned previously in this discussion in which special librarians were less likely to value than other librarians. An inconsistency in the value of benefits was also seen in the inspiration results section as a significant statistical difference between other and special librarians was only found when the sample selection criterion of what the respondents wanted to be while they were in library school was used and not with the current job sample. Discovering why these differences exist would provide further details in understanding special librarians and what makes them unique.

Despite the differences found in what special and other librarians value in a career and how they view their current position, both types of librarians are satisfied with their career in librarianship. This finding is very similar to what was found in the reviewed literature as Gordon and Nesbeitt (1999) and Moniarou-Papaconstantinou and Triantafyllou (2015) both found that library professionals are satisfied with their jobs and careers. According to the answers provided in the WILIS 1 survey, the majority of both types of librarians (64% other and 61.5% special) “Agree” that they are satisfied with their job. However, only 26.7% of other librarians and 27.2% of special librarians strongly agree with this assessment of their job. This suggests there is room for improvement. Research as to why more respondents did not rate this in the highest range as well as the reasons behind those who rated that they were not satisfied with their jobs could provide integral information in retaining librarians, especially special librarians, in the library profession and keeping them satisfied with what they are doing as well as recruiting more.

Summary of Findings

After all of the analyses were completed on the variables involving demographics, inspiration, education, career history, and job satisfaction, much was learned about both types of librarians. Although special librarians are very similar to librarians who work in more traditional library settings, some notable differences were discovered by the statistical testing. First, special librarians were found to have a higher representation of males and single (never married) respondents. Also, testing found that special librarians earned an average of \$11,882.07 more than traditional librarians. Despite this, these higher paid librarians were not inspired to enter the profession because of salary.

Oftentimes, special librarians were inspired to continue their work in libraries and choose a career in librarianship because of previous work as a library assistant. They were also inspired by the unique and flexible career options available in special librarianship. Special librarians were less likely to be inspired by the intrinsic aspects of wanting to help people, trying to make a difference in the world, and meeting family responsibilities.

Special and other librarians did not statistically differ much in regards to their education as they both earned an average of 2.5 degrees of similar types. When the professional aspects of training and continuing education were analyzed, special librarians were more interested in obtaining training in the nontraditional skills of management, finance, and marketing than in the more traditional LIS skills of information services/research and maintaining their collection. They were also not as concerned about obtaining continuing education credits for recertification as other librarians were.

The career path of special librarians were similar to that of the other librarians. As librarianship is often a second career for many librarians, both types of librarians worked in a non-library job before they attended LIS school. In their jobs before library school, special librarians were more likely to have already worked in a special library while other librarians were more likely to have worked in more traditional settings. After library school, the majority of respondents did go on to work in library or information centers. In their jobs after LIS school as well as their current one, special librarians were more likely than other librarians to have worked in special libraries. This suggests that many special librarians will often continue to work in special library positions throughout

their careers. In regards to career mobility, special librarians were more likely to move up in the organization in which they are currently employed. Additionally, federal, state, and local government libraries were shown to be both the longest and highest-achieving job setting for special librarians.

Exploration of job satisfaction did reveal that both types of librarians were satisfied with their careers. However, some notable differences regarding the value ratings of certain components that are responsible for job satisfaction were found when comparing special librarians with the others. Although both types of librarians valued receiving enough support/equipment to get their job done and having a job that is interesting, special librarians were more likely to value opportunities to advance their careers and less likely to value the traditional service aspects of librarianship. Special librarians did not value the service-oriented characteristics of having contact with people, helping others, having the feeling that they are doing something meaningful, and having a job that is useful to society as highly as other librarians did.

Study Limitations

This study was limited by several factors, including time and its data source. Since this study was a secondary analysis of the Workforce Issues in Library and Information Science (WILIS) 1, it was largely limited to what was included in the survey. However, this paper's research questions had been developed before the discovery of the WILIS study, so the survey had to be closely analyzed to make sure it addressed all of the areas of interest. While some of these focus areas may not have been as clearly addressed as this researcher would have hoped, other areas were explored in more detail than had been planned. Despite this, the comprehensiveness of the survey and the

enormous collection of variables certainly provided several avenues to develop an understanding of special librarians. With 2,653 respondents, the WILIS 1 was such a large-scale and time-consuming undertaking that a survey created just for this study would not have come anywhere close to its numbers and available data. Due to its impressive benefits outweighing any challenges, the WILIS 1 survey was chosen as the data source for this study.

The WILIS 1 study did have one notable limitation that impacted the diversity of the response data collected. This limiting factor involved the fact that the study was isolated only to respondents who attended library and information science schools in North Carolina. Although graduates from these North Carolina schools may have been from all around the world and moved to various places after graduation, this geographic requirement is a notable factor that served to limit the surveyed population. Limiting the study to North Carolina, though, was purposeful as WILIS 1 researchers set off to learn more about LIS graduates from these schools. This limitation had a residual effect on this study's population, however, a created survey for this study would not have received such a high response rate, so this limitation was accepted.

Time served as another limiting factor to this study. The WILIS 1 survey presented such a wealth of information that only a fraction of possible variables were explored. Due to the time constraints of completing this study in a semester, decisions were made to limit the variables that were addressed, however, every attempt was made to fully answer each research question.

Future Research

The WILIS 1 survey provided a wealth of information that created innumerable opportunities for exploration and research on librarians and the library profession. In many sections, detailed questions were not only asked about respondents' view of the library profession and its future, but several addressed difficult topics like discrimination in the workplace and sources of dissatisfaction with the profession. This paper's study did not even scratch the surface of the amount of exploration the WILIS 1 data can provide. More studies could be conducted analyzing the WILIS 1 survey data.

This paper's study could also have been expanded to include interviews with a few practicing special librarians to obtain personal accounts of their experiences in the library profession. These special librarian interviewees could also have been given the data and test results that were completed for this study to review and analyze. Recording their reactions to the study's outcomes and their own interpretations of the data would have provided valuable depth and an inside perspective on what it means to be a special librarian. This would have been another method to use to further analyze trends and differences among special librarians as well as develop conclusions about the current state and future of special librarianship.

As the WILIS 1 approaches its 10 year-mark, this researcher believes that there should be plans for another iteration of this study to include the newest generation of librarians. Similar questions and procedures should be used in order to allow for direct correlations and comparisons between the two sets of studies. The WILIS 1 study created a methodology for library and information science schools to use in order to keep track of their graduates. Studies like these should be conducted on a consistent basis in

order to ensure that LIS schools are appropriately addressing the needs of future library and information professionals. Keeping a pulse point on new trends among their graduates and patterns in the library field should be of utmost importance to LIS schools. As leaders in the library profession, LIS schools in North Carolina should, again, make their impact.

Another possible opportunity for further research into discovering what makes special librarians unique could involve a large-scale survey, like the WILIS 1 study, that limits its respondents to only practicing special librarians. This study would provide a plethora of data to create a deeper understanding of special librarianship as a whole. There has not been many studies conducted with special librarians as the sole focus. Since the study would only focus on special librarians, comparisons could not be made with other librarians, however, details about individual special librarians, including their education, motivations, career path, job satisfaction, etc., could be explored more closely. Data could be compared to define patterns and statistical differences among all of the special librarians. Comparisons could even be made between the different special library settings, like government, corporate, and health/medical libraries. Additionally, the study could be expanded globally and special librarians in different countries could be compared. This study would provide integral knowledge about an area of librarianship that is often overlooked and not clearly defined.

Conclusion

Through a secondary analysis of the Workforce Issues in Library and Information Science (WILIS) 1 data, this study aimed to develop a deeper understanding of the individuals who serve as special librarians in their various organizations in order to create a defining view into the profession of special librarianship. Comparisons made between special librarians and those who have chosen to work in more traditional settings helped distinguish the areas where the two types of librarians significantly differed, therefore identifying the aspects unique to those who work as special librarians. Although both types of librarians had many similarities, a few distinctive characteristics were discovered. For example, special librarians were more likely to have a higher representation of males as well as those who are single. Motivations and valued job characteristics were areas where the most significant differences occurred. Special librarians would often value job qualities that are uniquely available in special libraries, like flexible career options and opportunities for advancement while they were less inspired by the service-oriented aspects of traditional librarianship, like helping others and making a difference in society. Although they support the organizations they work for, special librarians are required to combine traditional and nontraditional library skills in order to get their jobs done. As this study concludes, it is the hope of this researcher that specific details about special librarians were discovered to distinguish them from other librarians, therefore progressing one step closer in understanding what makes special librarians truly so “special.”

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